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ABSTRACT

This unit provides elementary teachers with ideas for assisting their students in developing an understanding and appreciation of sound resource use. It contains projects and activities that focus on both the litter problem and on waste management solutions. These materials can be adapted and modified to accommodate different grade levels and content areas. Many of the activities employ a "hands-on" approach which is intended to increase environmental consciousness and personal responsibility for the environment. The unit contains: (1) a list of 39 activities; (2) a glossary for teacher reference that can be adapted for student use; (3) a recycling fact sheet; (4) litter control slogans/bulletin board captions; (5) lists and descriptions of resource materials; (6) addresses of recyclers in Louisiana; (7) illustrations of recycling activities; (8) incentive award suggestions; (9) a skit on litter control; and (10) lyrics and music for the song, "Clean is King." (ML)

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LITTER CONTROL, WASTE MANAGEMENT, AND RECYCLING RESOURCE UNIT

BULLETIN 1722

1985

THOMAS G. CLAUSEN, Ph.D.
Superintendent

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LOUISIANA

CLEAN IS KING

STATE OF LOUISIANA

DEPARTMENT OF EDUCATION

Bulletin 1722

1985

LITTER CONTROL, WASTE MANAGEMENT, AND RECYCLING RESOURCE UNIT

K-6

Issued by

Office of Academic Programs
and
Department of Transportation and Development

Thomas G. Clausen, Ph.D.
Superintendent

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Spring 1984

Improving the quality of life for citizens in the State is a major objective of public education in Louisiana. Through the educational process, citizens become more aware of their civic and moral responsibilities to their community, state, and nation. We are fortunate in Louisiana to enjoy immense beauty and liberal financial rewards from the State's abundant natural resources. Accordingly, it is our responsibility to protect resources that may be depleted, contaminated, and otherwise destroyed as a result of man's neglect and abuse. We must provide, early in the education of our youth, opportunities for them to learn to preserve and to conserve the State's resources for the survival and the pleasure of future generations.

This bulletin, Litter Control, Waste Management, and Recycling Resource Unit, has been developed in cooperation with the Department of Transportation and Development to assist teachers in their continual efforts to provide a well-balanced education for children in the State.

Thomas G. Clausen

Thomas G. Clausen, Ph.D.
State Superintendent

ACKNOWLEDGMENT

This publication represents the cooperative efforts of personnel in the Bureau of Secondary Education, the Bureau of Curriculum, Inservice, and Staff Development, and the Louisiana Litter Control and Recycling Commission. Special commendation goes to members of the writing team who worked diligently to make this publication a reality.

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INTRODUCTION

The world we live in is finite. We have certain requirements for life that are met within the biosphere, that portion of our world that supports life. None of our required supplies is being added and none of our by-products is being eliminated. An analogy would be a family locked in a room with lots of food, material for making clothes, wood for warmth and cooking, and clean water. In the beginning, this would be acceptable, but over time, with no addition of supplies and deletion of waste products, the quality of life would diminish. In order to ensure an extended acceptable lifestyle, we must not deplete natural resources or contaminate our living space. To achieve these goals, we will do well to follow the environment 3-R's: Recycle, Reuse, and Repair.

It is clear that many environmental ills are extensive and must be corrected by formulation of national and industrial policy. So what can we, as individuals, do? The most important step is to recognize that each of us is responsible for our own actions. Though it may seem inconsequential that we live an environmentally sound lifestyle, just think how it would be if, on a single day, all 4,500,000 passengers of Spaceship Earth recycled their aluminum, glass, and paper, reused several household items, and repaired one appliance! Wouldn't that be great? With this goal in mind, accept the challenge of assuming responsibility for your personal activities and using this resource guide to educate your students.

As teachers of young children whose behaviors have not been firmly established, you are in a position to orchestrate the development of their environmental conciousness. That is, you can help them acquire an appreciation and understanding of the logic of sound resource use. As previously pointed out, each small step becomes more important when it occurs in conjunction with someone else's small step, and someone else's, and someone else's, . . . This is especially true if, by your actions, you have served as an example to others (and we know the influencing power of teachers!). As a matter of fact, if you convince two of your friends not to litter and to become recyclers, and each of them convinces two of their friends the next day, and each of those friends convinces two of their friends on the third day, and so on, then by the twenty-eighth day everyone in the U.S.A. would be in our corner and by the thirty-first day, the World! Utopia? Yes, and I agree it just won't happen that way, but your, my, and your class's small steps will certainly be a good start!

An ancient Kenyan proverb places our concern in its proper perspective: WE WERE NOT GIVEN THIS LAND BY OUR PARENTS, IT IS ON LOAN TO US FROM OUR CHILDREN. Think about it. Can we risk resource depletion?

Robert A. Thomas, Ph.D., Director
Louisiana Nature and Science Center

MISCELLANEOUS RECYCLING FACTS

AVERAGE COMPOSITION OF MUNICIPAL SOLID WASTE (based on national 1975)

COMPONENT	PERCENT
paper	29.0
yard waste	20.2
food waste	17.8
glass	10.4
ferrous materials	8.6
wood	3.8
plastics	3.4
rubber/leather	2.6
textiles	1.6
miscellaneous inorganics	1.5
aluminum	0.7
other nonferrous metals	0.3

COMPOSTION OF HIGHWAY LITTER

paper	59
cans	16
miscellaneous	13
glass	6
plastic	6

ENERGY SAVINGS IF RECYCLED MATERIALS RATHER THAN RAW RESOURCES ARE USED

steel	75%
glass	35%
aluminum	95%
paper	60%

LANDFILLS

These cost Americans 8 billion dollars per year. Estimates tell us that 60 to 70 percent of materials in landfilis can be recycled, so dollar savings can be great.

PAPER

Every ton of newsprint recycled saves 17 trees (if all paper in New Orleans were recycled for a single day, 1200 trees would be saved).

Ms. Margie J. Schoenfeld
Coordinator
Recycle New Orleans
Louisiana Nature Center

How to Use the Resource Unit

This resource unit provides elementary teachers with flexible, readily adaptable activities to supplement and to enrich the present curriculum. It contains projects that will focus attention on the growing problems of litter, waste management, and recycling. The suggested "hands-on" experiences will help to foster a positive attitude toward personal responsibility in these areas.

The unit is nongraded by design, allowing teachers the freedom to add or to delete phases of an activity according to the needs and abilities of their students. Although many projects are related and can be combined, they are not listed in any form of sequential order; therefore, teachers may select whatever they feel is suitable.

Many of the activities can be easily incorporated into the content areas, adding an extra dimension of involvement. Additionally, the activities can be used anytime during the year, since litter and recycling are not seasonal problems.

Teachers and students will not have to spend much money on materials for projects since most of the materials can be brought from home or found in the school environment.

Classroom teachers from across the state have contributed their suggestions and ideas to this resource unit; others have piloted the unit and found it to contain an excellent assortment of practical, successful activities.

LITTER CONTROL, WASTE MANAGEMENT, AND RECYCLING RESOURCE UNIT

GOAL:

The overall goal of this program is the development of a citizenry that is environmentally literate and possesses positive attitudes relative to litter control, waste management, and recycling disposable materials.

OBJECTIVES:

- The student will develop a sense of personal responsibility regarding litter and recycling.
- The student will be able to identify, state orally, or write a definition for the term litter.
- The student will be able to identify the steps in the recycling of solid waste.
- The student will be able to develop and to implement plans to reduce different types of litter.
- The student will be able to describe the social, economic, and aesthetic impact of waste mismanagement.
- Students will be able to identify resources available so that they can become involved in the recycling process.

ACTIVITIES

1. Introduce the term litter through class discussion. Define the term litter and have students name different types of materials that may become litter.

   Some types of litter are as follows:

   Paper--wrappers, reading materials, napkins
   Metal--cans, nails, automobile parts
   Plastic--containers, bags, six-pack rings, combs, fishing line
   Glass--bottles, jars, light bulbs
   Rubber--tubes, tires, boats
   Building Materials--boards, bricks, shingles
   Food--garbage

2. Have students organize a poster contest as a class activity or school-wide project. Emphasis should be placed on litter control and waste management.

3. Have students decorate their own litter bags for an art activity. They may want to use some of the litter slogans (see page 33) on their bags. They will use the litter bag at their desk for a given period of time. At the end of this period the contents will be evaluated as to usability and future conservation. Using the bags daily will cut down on trips to the waste basket and will make students more aware of their own tendencies to waste natural resources.

4. In order to identify the reasons why people litter, place students in small groups of five to allow for individual contributions. Select a recorder for each group and identify reasons why people litter: laziness, carelessness, lack of awareness, inadequate litter receptacles, peer influence, disregard for the property of others, apathy, lack of sense of responsibility, lack of discipline, and lack of training. Regroup students and record ideas on the chalkboard. Students will use these ideas as an evaluative tool to survey their community and to prepare a written report on the predominant causes of littering in their community.

5. Invite the school nurse, physical education teacher, and/or other resource persons to discuss some of the hazards of litter with the class. View and discuss slides and films on the hazards of litter. Using illustrations, point out hazards such as: litter can cause bruises, cuts, sprains, and broken bones; litter attracts and harbors infectious rodents, flies, and other insects; and piles of litter can easily be ignited by carelessness with fire or by spontaneous combustion. Contact your local Clean City Board director or Mayor's office for a resource person. This person may provide booklets and other free materials for your students. Resource people may come from the

local sanitation department, reclcyling centers, local government, or historical societies.

6. Have the class become involved in creating a bulletin board. The students will find and prepare pictures to illustrate littered scenes and clean, beautiful scenes. (A number of bulletin board captions are listed on page 33 if students need help getting started.)

7. Plan a week in which students select a small project around their own homes that can be done with minimal help from family; encourage them to take before and after pictures. Suggested projects--weeding, cleaning up and reorganizing their own bedroom, the cleaning of garage, cellar, attic, etc.--stress their getting permission from their family prior to embarking on the project. Display evidence of their success or finished products. For follow-up and integration into the language arts, ask students to submit a written report on their project.

8. Partly fill several glass jars with water. Have the students examine the water and describe what it looks, smells, and feels like.

   Have the students put some small pieces of litter into the jars. Use paper, glass, fruit peelings, plastic, and aluminum. Ask the students to look at the litter each day for several days. Have them number their paper from 1 to 5 and write the answers to the following questions:

   1. What pieces of litter changed?
   2. Which ones remained the same?
   3. Did the water change color?
   4. Can litter cause water pollution?
   5. What might happen if plants and animals lived in this water?

9. Students will clean up a local area, analyze the nature of the trash, and create a litter monster to expose other children to the cleanup effort.

   - Young students are often frustrated by a feeling of helplessness when they are presented with environmental problems over which they can exercise no control. However, they can become active in beautifying their immediate environment. If your school grounds could use a greening and cleaning up, see if your class is interested in taking it on as a beautification project. A vacant lot or park in the area might also be a candidate for sprucing up. This activity provides some suggestions for a green-and-clean-up effort.

   - Take your class out on a walk through the area they have chosen for the project. Discuss what class members can do to improve it. Bring bags to collect the litter. Discuss methods for keeping the area clean, such as notifying other classes in the

school and local neighbors of the effort. A fun way to publicize your efforts is to make a litter monster. When you return to the classroom, have children dump their trash onto newspapers. Have them categorize their finds according to materials from which they are made. Then challenge them to create a litter monster on a bulletin board in the hallway for others to see (Fig 4). They could use cans for protruding eyes and crumpled candy wrappers for skin. Staple or tack the litter onto the board in the monster shape and develop a sign to encourage other students to keep the project area clean. The sign could read, "Are you a litter monster?" or "Help stamp out litter monsters!" Children in the school could be encouraged to pick up litter from the school grounds and add it to the litter monster by making the monster fatter or creating a long tail.

- As motivation to keep the school grounds clean, spot check at irregular intervals. Award extra recess or free time if grounds are clean.

- The whole idea of the garbage experience is to begin to foster a recycling attitude in the children. They can help with part of the environmental problem.

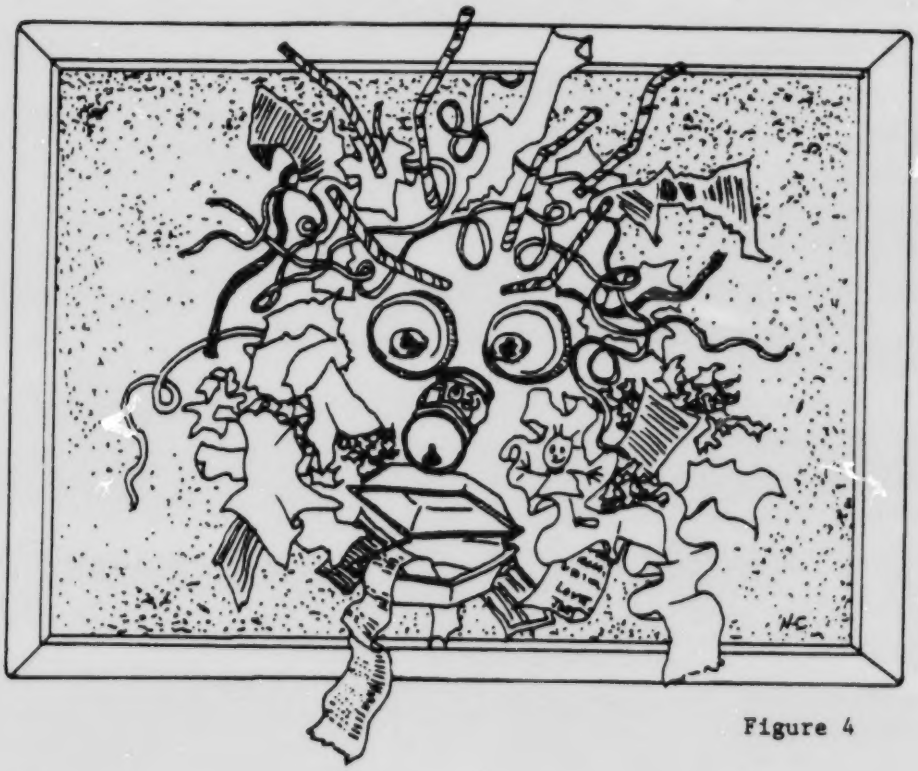


Figure 4

10. To center attention upon the idea that animals are hurt by litter, help the children create zoo animals and/or animals of Louisiana from recycled trash. Cardboard, towel and tissue rolls, cans, plastic jugs, and newspaper will come in handy.

- Talk about problems litter causes for animals. Help the children write clever statements from the animal's point of view expressing opinions of littering by people. Write statements on cardboard strips.

- Set up a display of the animals and their statements in the room or hallway display case.

EXAMPLES OF STATEMENTS: "I'm a bear, and I can't litter!"
"I'm a water snake. Don't throw trash in my lake!"
"I'm a lion, and I hate to lie on litter!"

- An article which will give you some innovative ideas for creating the animals is "Garbage Eaters," Ranger Rick's Nature Magazine, July 1976, pp. 16-19.

- Some common types of litter and their harmful effects on wildlife are listed here for your reference:

METAL PULL-TABS--Fish (and human babies) can choke on these or swallow them.
PLASTIC 6-PACK CARRIERS--These can strangle or starve birds and other animals by putting such pressure around their necks that they can't swallow. These carriers should always be cut apart with scissors before being discarded.
BOTTLES AND CANS--These may cut people or animals. They can lame large animals such as cattle, and often trap small mammals which can't climb out once they're inside.
PLASTIC STRIPS AND BAGS--These can suffocate baby birds when used in nest construction.
MATCHES AND CIGARETTES--These can lead to fires.

11. As a review, give each child wrapped crackers, fruit, or vegetable sticks wrapped in foil or plastic wrap. Ask them to tell you whether or not the wrapper is useful and why or why not.

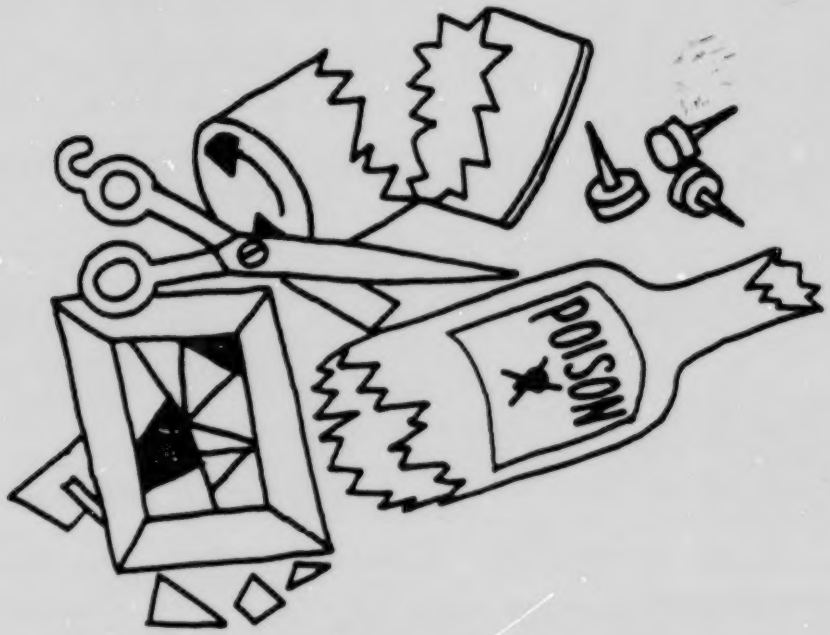
- Ask the children to unwrap the treat and eat it. Afterward, ask them to tell you whether or not the wrapper is still useful or whether it has become waste.

- Ask one-half of the class to drop the wrappers on the floor. Ask what this action is called. (The correct response is "littering.")

- Ask each child in the class to put his or her wrapper in the correct receptacle so no one will be littering.

12. Make a list of litter you can find in the drawing below. Put an "X" next to the name of each piece of litter which could hurt an animal. Put an "O" next to the name of each piece of litter which could hurt a person. Discuss and compare the lists.

13. Have students think about one time when they or someone they know was hurt by litter (like broken glass or a nail). Ask them to draw a picture to show what happened.



14. Have students write a limerick or another type of funny poem about or relating to litter control, waste management, or recycling.

An example of a limerick is -

> There was a young lady of Niger who smiled as she rode on a tiger; they returned from the ride with the lady inside, and the smile on the face of the tiger.
>
> Anonymous

15. Have students design or create "Litter Critters" from reusable containers found at home. Set the critters around the classroom next to waste baskets, near sinks, on shelves, and on top of cabinets to serve as reminders.

16. Show special recognition to students observed picking up litter on their own by awarding them a certificate, sticker, or calling their names over the PA system.

17. The following suggested field trips may be used to motivate and encourage participation or as culminating activities:

    a) Visit a recycling center.
    b) Attend a local clean city board meeting.
    c) Visit a compost pile.
    d) Tour the landfill areas in the local community.
    e) Tour the local water company or management system.
    f) Tour a grocery store and look for overpackaging.
    g) Visit a local park or recreational area. Combine this with the idea of a clean-up for the area, enjoy a picnic afterwards, and document the condition of the area before and after your visit.

18. Begin a class discussion on the children's ideas on solving the problem of pollution. Have them draw pictures showing their solutions. Their ideas can be displayed on a bulletin board (see page 34).

19. Students can encourage their family to take bags to the grocery store whenever shopping. Have students record the number of bags they refuse in one week. This encourages conservation of our natural resources.

20. Build a small landfill. Students will need two identical pieces of each of the following materials:

    Food scraps, newspaper, cardboard, cloth, soap chips, paper, glass, aluminum, and steel cans, plastics, copper wire

    1 cardboard shoe box
    1 piece of aluminum foil or plastic, large enough to line the shoe box
    Toothpicks
    Several pieces of string, cut about 6 inches long
    Masking tape
    Several small pieces of cardboard
    ½ glass of water

    They are now ready to build a landfill. Ask students to do the following:

    - First line a shoe box with aluminum foil or plastic.

    - Put the soil in the shoe box. (Don't use potting soil, because it does not contain the tiny creatures (organisms) that break down natural waste.)

    - With tape, attach a piece of string to each toothpick. Tape the toothpicks to your waste objects. Write the name of each waste object on a small piece of cardboard. Fasten each piece of cardboard to the second end of the string with masking tape. Bury two identical rows of waste materials in the soil, leaving the cardboard labels on top of the soil surface. Write down the date you buried the waste items.

- Add a little water. Put your mini-landfill in the sunlight, perhaps on a windowsill. Wait about 10 days before you continue. Write down the date you examine the items.

- Carefully remove the waste items from one row of your landfill. Examine the items with a magnifying glass.

- Answer the following questions on your paper.

  1. Which items in the mini-landfill have decomposed the most?
  2. Are the items which are decomposing man-made or natural?
  3. Are the decomposing items biodegradable?
  4. Which items have just started to decompose? Why do you suppose they are decomposing more slowly than the first group?
  5. Which items show no signs of decomposing? Can you tell why? Will they remain unchanged forever? Are they made of materials which should be reused or recycled instead of being buried in landfills?
  6. Why might mold form on your mini-landfill? What would happen if the mini-landfill had been made of sand and no water had been added? What happens to waste left on a desert?
  7. Suppose the landfill wastes had been put in potting soil. Would the biodegradable wastes have decomposed as quickly? Why or why not?
  8. Did you notice any space around some of the waste items as you dug them out? What do you think caused that space to form? If this happens in a full-sized landfill, might this affect how the land can be used after the landfill is filled with trash?
  9. If you let water drip through your landfill, would the water get dirty?

21. Refuse is often buried in a sanitary landfill. Help the students to classify mentally some common refuse items into the following groups: (1) that which may be disposed in a landfill and (2) that which should not go into a landfill. Have them put items they are not sure of in a third category. Write their selection under these three column headings:

    "Go to Landfill" "Not to Landfill" "Not Sure"

    - Help them state reasons for their classification system. Remind them that some materials can be recycled by people. Ask them what the items in the "Go to Landfill" category have in common.

    - Possible Refuse Items to Consider: (1) aluminum cans, (2) newspapers, (3) automobile tires, (4) food scraps, (5) glass bottles, (6) plastic bags, (7) grass clippings, (8) half-full paint containers, (9) nonaluminum metal containers, (10) old rags, (11) pine cones, (12) cardboard, (13) radioactive wastes, and (14) chemicals.

22. Help students research the following questions using library books and textbooks:

- What was life like in the United States in the 1600's? Who lived here? Where did most of the people live? What did these people do for a living?

- Did they buy many ready-to-use products? What kinds of packaging was used for food?...for clothes?...for personal items? Was "used" packaging much of a problem? Why or why not? What was packaging like 500 years ago, 1,000 years ago, and 2,000 years ago? What was life like for cavemen?

23. Build a class discussion around the following questions:

- What kinds of packages might you use on the moon? What would happen if you threw a gum wrapper on the ground on the moon?

- What kinds of packages do astronauts use during space flights? How do people drink water in space?

- Ask the children to imagine buying a package of powder and adding water to make soup. Then ask them to imagine boiling the package to make another kind of soup! Tell the children that packages in the future might be this fantastic. Ask them to imagine other kinds of fantastic packages of the future.

24. Have students participate in a home activity. Separate waste at home into proper containers (e.g., paper, glass, plastic, and aluminum cans). Compare the weight and amount each family collects in a given period. Chart the results. As an extension to this project, students can encourage neighbors to become involved with recycling.

25. Have students compare the cost of items packaged in various ways (e.g., throw away bottles as compared with returnables, individual packages as compared with economy packages). This lends itself to being incorporated into a math lesson on money.

26. Have students write and produce a puppet show or drama (or choose a play from those provided in this unit) in the intermediate or upper grades to develop a critical awareness of excessive or unnecessary use of packaging material and alternative uses of recyclable items. The puppet show or drama could be presented to the primary grades.

27. The teacher can design a class progress chart. For example, a child will get a smile sticker put on the chart next to his/her name for every 25 cans, bottles, or newspaper that he/she brings to the classroom. The teacher will determine the reward system. (See activities 34, 35, and 36 for profitable ways to dispose of items collected.)

28. Explain to the members of the class that some waste objects they cannot seem to find a use for can still be reused.

- Tell the class that paper, glass, and aluminum waste objects can often be made into new things in special factories. This is called recycling.

- Discuss the fact that people are responsible for disposing of their own waste properly. Encourage the children to discuss how they could recycle or dispose of waste:

    1. inside their homes
    2. in their yards
    3. walking down a street or road
    4. in the classroom
    5. in the hallway
    6. in a car or bus
    7. on the playground
    8. in a park
    9. in the woods
    10. on a boat

29. Display a pop bottle. Have students create and illustrate a story about "Polly, the Pop Bottle." This story should tell the experiences the pop bottle may have from the time it is produced until it is discarded.

    (Fact: Energy required to make a pop bottle is equivalent to that expended by 10 people working one hour.) Have some students share their stories with the class.

Discuss: Now the pop bottle is empty. Where does the bottle go? to the garbage? If it goes to the garbage or is broken, what will have to happen to replace the bottle? What can be done with the bottle? What can we do with other types of bottle?

- Using returnable bottles instead of throw-away bottles and cans saves energy. It is estimated that the purchase of a six-pack of soft drinks in returnable bottles will save the energy equivalent of 1½ pints of gasoline. The average family car could drive about 2½ miles on that 1½ pints of gasoline.

30. Have the students participate in an investigation to illustrate how paper is recycled. Shred a newspaper and soak it in water overnight. Blend the soaked paper in a blender or with an egg beater with sufficient water. A little clorox can be added if white paper is desired. Drain as much water off as possible. Press the blended material as evenly as possible between two pieces of fine mesh screen wire. Press with blocks or bricks. When it is dry, examine the paper. It will be thick. Cut or tear a small piece for each student.

- Discuss with students how recycling saves energy. More energy is used to make newspaper, glass, and cans than if these materials were recycled.

31. Students will describe a simple cycle in nature and relate what people can do to follow nature's pattern when they use paper products.

- There is wisdom in the workings of nature. Natural systems are models of efficiency and balance. A forest community runs on energy from the sun. The trees and herbaceous plants capture the sun's energy and use it to convert carbon dioxide and water into simple sugars which makes the plant grow. Plant-eating forest dwellers obtain some of their nourishment from these simple sugars. The energy is then passed on to carnivorous animals through a complex forest community food web. The original energy from the sun is converted to nutrients which are passed through the food web and finally recycled back into the soil by decomposers that turn the waste of fallen leaves and other organic matter into nutrients. The nutrients are taken up again by the plants, and the cycle is continued. There is no waste. No landfills of discarded materials are found here. The system hums as it has for centuries--beautifully and in balance.

- What can we learn from studying nature's cycles? How can we incorporate some of the balance and efficiency of nature's way into our own interactions with the land? Try using the transparency design (Fig. 1) provided to present a simple natural cycle to your students.

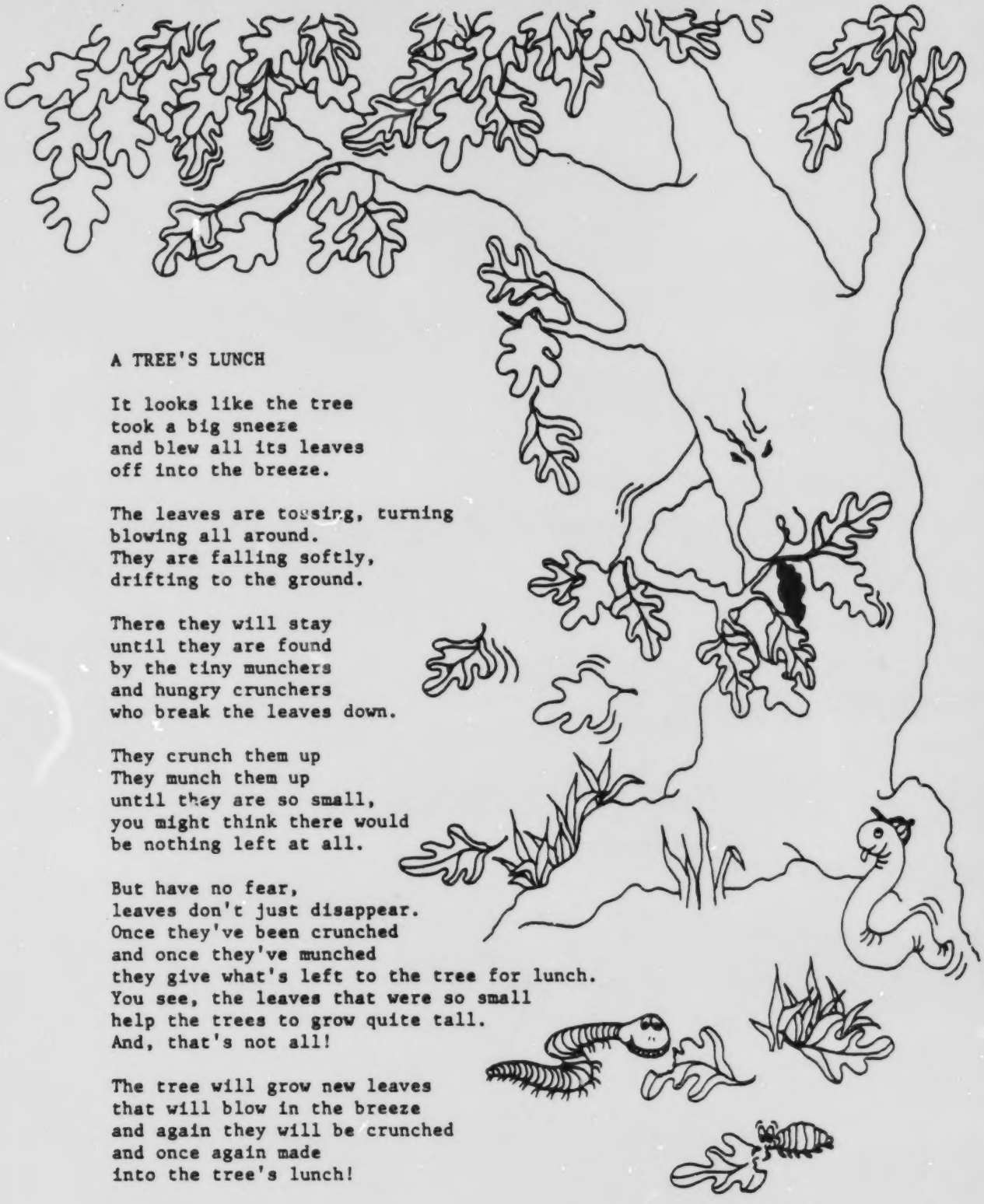
- Ask children to describe what is happening in the picture. Ask what happens to leaves when they fall to the ground. They will probably answer that the wind blows them or that people rake them up! Explain that the leaves are "eaten" and broken into little pieces by tiny animals in the soil. These slugs, earthworms, sowbugs, snails, and millipedes are some of the recyclers. Explain that the leaves are broken down until they are so small that their nutrients or "vitamins" are made available to the tree's roots. The tree uses these to grow. The next fall it sheds its leaves and the cycle goes on and on

- To help your students conceptualize this simple cycle, have them role-play it. Assign six children to form a tree. They can line up in pairs, face each other, and hold hands to make a trunk for food to go through. Have four children be the leaves. At first they should be spread out "on top" (in front of) the tree. They can then drift and tumble to the ground where the crunchers and munchers (three of each) could pretend to break them down. Have the leaves curl up as they get smaller and smaller and then crawl back up through the tree

trunk as the tree's lunch. They can then become new leaves. Have the rest of the class read the poem (Fig. 2) with you as the children go through motions; then let them exchange places so that each child has an opportunity to role-play.

- Children might not be enthusiastic about role-playing the poem. As an alternative, each student could receive a copy of the poem to initiate a class discussion.

Figure 1



A TREE'S LUNCH

It looks like the tree
took a big sneeze
and blew all its leaves
off into the breeze.

The leaves are tossing, turning
blowing all around.
They are falling softly,
drifting to the ground.

There they will stay
until they are found
by the tiny munchers
and hungry crunchers
who break the leaves down.

They crunch them up
They munch them up
until they are so small,
you might think there would
be nothing left at all.

But have no fear,
leaves don't just disappear.
Once they've been crunched
and once they've munched
they give what's left to the tree for lunch.
You see, the leaves that were so small
help the trees to grow quite tall.
And, that's not all!

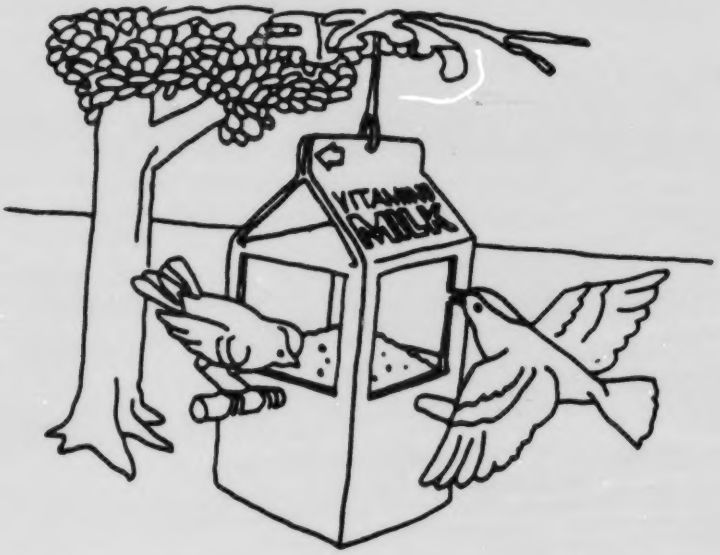
The tree will grow new leaves
that will blow in the breeze
and again they will be crunched
and once again made
into the tree's lunch!

M. O'Connor

Figure 2

32. Have students find at least six objects which are in their home or yard and are useless, unwanted, or discarded materials (solid waste). Ask them to find a new use for each object or for combinations of the objects. Have students show their inventions to their classmates. These may be used to create a bulletin board or displayed in their school for all to enjoy.

Ranger Rick's Nature Magazine has two reprints available free of charge called "Recycling" and "Recycle for the Birds," which have many creative and helpful ideas. Write to National Wildlife Federation, 1412 16th Street N. W., Washington, D.C. 20036.



33. Students will identify different items which can be recycled at school and at home.

- This activity is aimed at helping young children to think about what happens to the things they discard each day and to realize that their trash does not just go away. Copy the "R Is for Recycling" student activity sheet provided (Fig. 3). Ask children to relate where things they throw away each day end up.

- Reiterate the fact that the things we toss out do not just go away. They go somewhere--into the earth. Distribute the "R Is for Recycling" sheet to your students. Challenge them to find all the items in the picture which could have been recycled and circle them.

- Discuss the picture with your students and ask them to relate which items they circled for recycling and how they could be used again.

Talk about actions children can exert to recycle on their own, such as washing out containers and reusing them or using both sides of a piece of paper. They could also discuss ways they can help their families to recycle cans, bottles, and newspaper by collecting and bundling them for delivery to a recycling center. Find out (or have children find out) if your community has a recycling center and send the address home with your students.

R
IS FOR RECYCLING

Discover the way to make the garbage pile smaller.

Find and circle all of the things that could have been recycled.

How many things did you find?

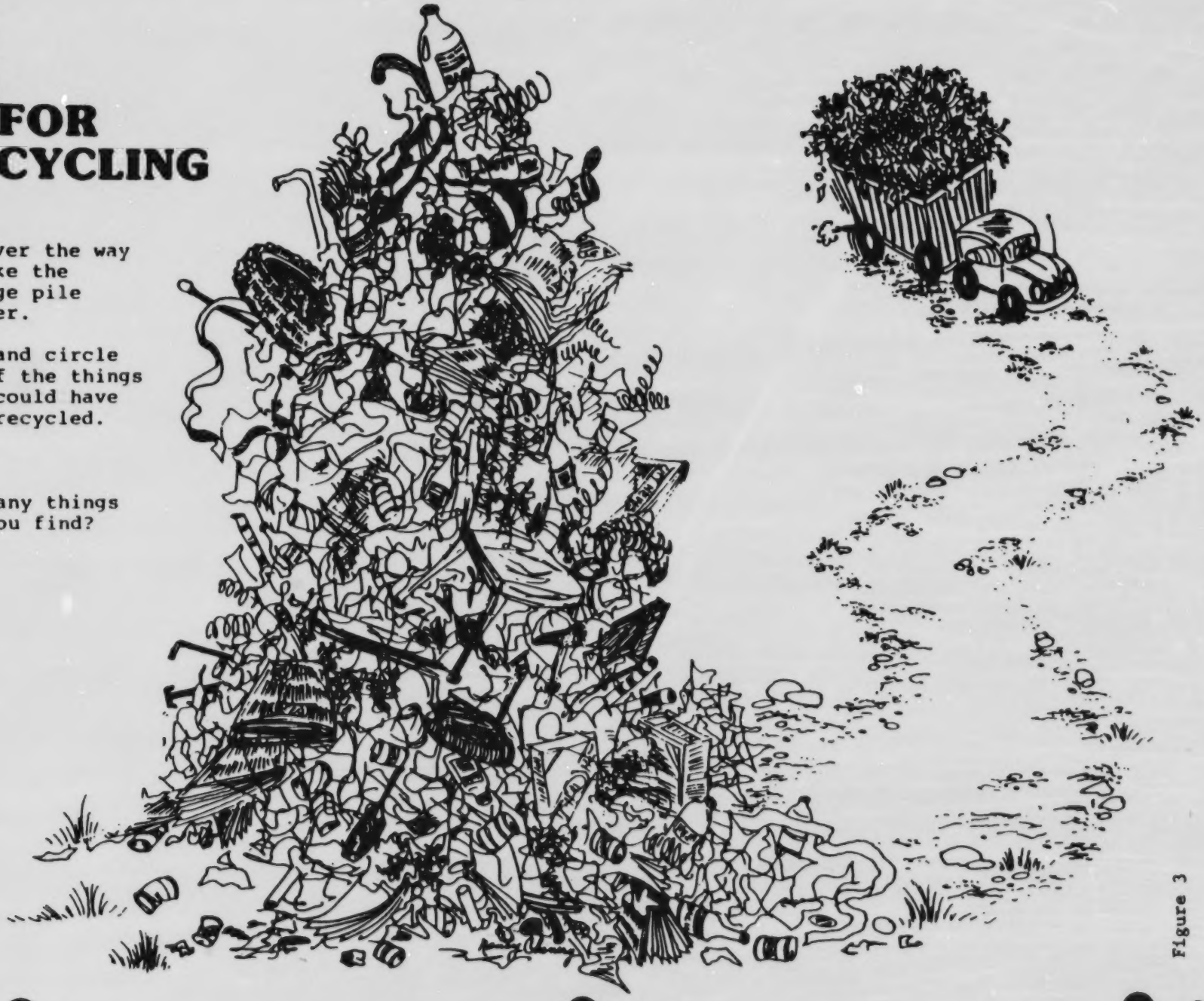


Figure 3

34. Set up three containers (waste baskets) and mark them recyclable, biodegradable, and solid waste. Place used papers in the recyclable container (a rectangular carton into which the papers fit would be better than a round container).

- Tell the children to put their paper flat into the carton and not to crumple or tear the paper. When the carton is full, have it stored until a local organization has a paper drive. Keep a record on the blackboard of how many cartons are filled per semester. Remind the children that paper comes from trees and if we save paper, we can save trees.

- Ask the children to list ways we can save paper. Remind them they can also save paper and trees by conserving paper at home and in other places. Tell them to remind their parents to save paper and trees.

- The biodegradable container should have a plastic bag lining into which are deposited things that decay readily. Some things that might be put into this container are facial tissues, food scraps, pencil shavings, and natural materials that children bring in to be disposed of (leaves, flowers, mud, fruit, seeds). This container should be emptied daily in a corner of the school grounds, or someone should take it home to be deposited in a compost pile. A willing parent whose residence is close to the school may be persuaded to help with this. A visit to the compost pile by the class could be arranged so that students could see the results.

- If you reach an agreement with the principal and custodian on where the material can be deposited, you could start a compost pile on the school ground. In a few weeks, the compost material will break down into crumbly, rich, organic material which then can be put on classroom plants.

- Have the children become aware of the use of so-called waste that can be biodegradable or things that rot. Remind the children that grass clippings from their lawns and other material can be used for fertilizer on their gardens and lawns.

- The only real "waste" basket is the one that glass, plastic, and cans go into. Some of these things can be recycled, but usually they are bulky items and storage is a problem. Also, the means for recycling this material is often nonexistent in a local area. However, if a suitable recycling alternative is available, you may want to separate glass and aluminum to be recycled.

- One of the best ways to handle the solid waste is to extend its use. Some material may be useful for arts and crafts projects, science experiments, or any other things that you might find a need for. (Most teachers do this anyway.)

- Bring some clean solid waste to school from a trash can at home or from litter found in the environment.

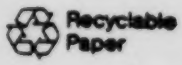
- Create some art from the solid waste you collected. (Make a sculpture, collage, painting, or other form of art.)

- Now write a poem or a short story about your art.

- Display your art and your creative writing in the classroom. (See the illustration below.)

35. Help the class organize a class project collecting aluminum cans for a month. The class could then purchase a trash container for the school or playground or buy some plants and flowers to beautify the school yard. Ask students to write a letter to the local sanitation department or the Louisiana Litter Control and Recycling Commission, P. O. Box 44245, Baton Rouge, Louisiana 70804, to get information on purchasing trash receptacles. One group of students could compose a letter to the principal about giving the receptacle to the school. Another group of students could decorate the trash receptacle by printing on it.

36. Organize a recycling project to generate funds for worthwhile school activities. This project may be done on a continuing basis with support from the local community. Aluminum and steel/tin cans, certain kinds of glass bottles, and newspapers may be collected and turned in to the recycling center. Be sure to watch for the "Recycliable Paper" emblem on packaging of items and include them. An example is on jars of Lipton Iced Tea Mix. Local community service organizations or business people may help by providing the means to transport the material to the recycling center.



37. Ask the children to bring food and cosmetic packages from home: cereal boxes, milk cartons and plastic jugs, vegetable cans, powder cans, shampoo bottles, etc.

- Find examples of overpackaging (packaging which is not necessary) and show these to students. Explain that the price we pay for an item includes the cost of the packaging. Therefore, items which are overpackaged cost us more!

- Set up a little grocery store using the packages. Put prices on each item. Include a toy cash register, play money, and grocery bags. Work out math problems for the children, using the packages.

- Discuss the "second-lives" various packages can have through reuse and recycling. Help the class create signs for the grocery store encouraging the reuse and recycling of packages. Encourage "customers" to reuse the grocery bags, also. Help the students design creative ways for the store to use less packaging. Use classroom discussion to discover ways to actually use the children's suggestions.

38. Ask students to keep a running list for a designated period of time of all items they see at home or littered in the environment which could be recycled or reused. Ask the children to list beside each item the material from which the object is made, where the object was found, and the new use for each object. Upon completion, ask the class to give a short presentation explaining their ideas. Give a prize to (1) the student with the longest list, (2) the student with the most useful ideas, and/or (3) the student with the most creative recycling ideas.

39. Make puppets from cardboard cylinders, scraps of material, pieces of construction paper, and other objects that would normally be thrown away. Decorate to match characters in reading lessons or people being studied in social studies.

Glossary
(For teacher reference--may be adapted for student use)

Air pollutants	Materials discharged into the air in large enough quantities to contaminate the atmosphere.
Aluminum	A silvery white metallic element, the most abundant in the earth's crust. It is used to form many hard, light, corrosion-resistant alloys.
Attitude	A feeling or emotion toward someone or something.
Back-End Loader	A refuse truck which has power driven loading equipment at the rear of the vehicle.
Bacteria	Microscopic plants, some harmless, some harmful.
Baler	A machine in which waste materials are compacted to reduce volume, usually into rectangular bundles.
Bi-Metal Can	A can made from two or more metals, usually steel or tin and aluminum.
Biodegradable Materials	Waste material which is capable of being broken down by bacteria into basic elements. Most organic wastes such as paper and food remains are biodegradable.
Boxboard	Paper used in the manufacturing of cartons and rigid boxes.
Broke	Paper that has been discarded anywhere in the manufacturing process. It is usually returned to a repulping unit for reprocessing.
Citation	An official summons to appear (as before a court).
Classification	Arranging and sorting of waste materials into groups.
Collection	The act of picking up waste materials at homes, businesses, or industrial sites, and hauling it to a facility for further processing, transfer to larger vehicles, or disposal.

Collection Center	A place where one can take waste materials that have been separated.
Commercial Waste	Waste material which originates in wholesale, retail, or service establishments such as office buildings, stores, hotels, universities, and warehouses.
Compactor	A mechanical device that compresses solid waste into a smaller volume.
Composting	A solid waste management technique which utilizes natural processes to convert most organic materials to humus by micro-organic activity.
Compactor Truck	A large truck with an enclosed body having special power-driven equipment for loading and compressing waste materials.
Conservation	The protection or preservation of something; planned management to prevent destruction or neglect.
Construction Waste	Waste material produced in the construction of homes, buildings, industrial plants, etc. The materials usually include such materials as lumber, metal parts, or sheet rock.
Container	A receptacle or a flexible covering for storage or shipment of goods.
Contamination	Making unfit for use by the introduction of unwholesome or undersirable elements.
Control	A method used to guide, to influence, to regulate, or to direct a system.
Conveyor	A mechanical device used to move materials between operations. Conveyors are used to move waste materials at collection centers, at transfer stations, and at resource recovery plants.
Corrugated	This term refers to a structural paper material shaped in parallel furrows and ridges for rigidity.
Crusher	A mechanical device used to break up waste materials into smaller sized pieces.
Cullet	Scrap glass, usually broken up into small, uniform pieces.

Debris	The remains of waste materials.
Decompose	To break down to basic elements, to rot.
Deinking	A process in which most of the ink, filler and other extraneous material is removed from printed waste paper. This produces pulp which can be used along with varying percentages of virgin paper in the manufacture of new paper.
Demolition Waste	Litter products from the destruction of buildings, roofs, sidewalks, and construction sites.
Deterioration	Falling from a higher to a lower level in quality, character, or vitality.
Disposal	Getting rid of, discarding, or throwing away of unwanted materials.
Dump	An open land site where waste materials are burned, left to rot, rust, or are simply deposited.
Dumpster	Large refuse container, usually used by apartment buildings, stores, restaurants, and so forth to keep waste until it is collected by a sanitation department or other refuse-hauling service.
Ecology	The study of the environment.
Embankment	A raised structure of earth.
Emergency	A condition that requires immediate action or attention.
Energy	Power, which may be in several forms: steam, electrical, atomic, or human.
Energy Recovery	A form of resource recovery in which the organic fraction of waste is converted to some form of usable energy.
Enforcement	Requiring adherence to laws, rules, and regulations.
Environment	All the objects, persons, and conditions in the surroundings.

Environmental Protection Agency (EPA)	An agency of the Federal government, formed in 1970, which has as one of its responsibilities ensuring that governmental, residential, commercial, and industrial waste-disposal activities do not affect the physical environment.
Ferrous Metals	Metals which are predominantly composed of iron. Most ferrous metals are magnetic.
Front-End Loader	A refuse truck which has power driven loading equipment at the front of the vehicle.
Garbage	Waste materials which are likely to decompose or putrify. Usually contains food waste from a kitchen, restaurant, slaughter house, or a food processing plant.
Groundwater	Water within the earth that supplies wells and springs.
Habit	The tendency to repeat a certain pattern of behavior without thinking.
Hazardous Waste	A solid waste that may cause or significantly contribute to serious illness or death.
Heterogeneous Waste	A variety of refuse materials, such as glass, paper, metal, and plastics.
Homogeneous Waste	Refuse composed of similar materials, such as paper, cardboard, and tissue.
Incinerator	A plant designed to reduce waste by burning.
Inorganic Refuse	Waste material made from substances composed of matter other than plant, animal, or certain chemical compounds of carbon.
Junk	Waste materials such as rags, paper, metals, broken furniture, toys, equipment, etc. The term usually implies that the materials can be recovered or converted to refuse.
Landfill	A place where rubbish is deposited and covered with earth.
Litter	Man-made, scattered, uncontainerized solid waste.

Litterbug	In the U. S., a person who throws trash along a highway, on a sidewalk, in a park, or elsewhere.
Littering	The act of carelessly discarding waste.
Maintenance	The upkeep of property or equipment.
Man-made	Something produced by human effort rather than by natural forces or by animals; artificially or synthetically created.
Methane	An odorless, colorless, flammable gas which is formed by the anaerobic decomposition of organic waste matter or by chemical synthesis.
Municipal Waste	Solid waste materials generated by residential, industial, or commercial sources but not including hazardous or demolition waste materials.
Natural	Anything in our world not made by people or machines.
Non-Ferrous Metals	Metals which contains no iron such as aluminum, copper, brass, or bronze.
Ordinance	A law or order made by a town or a city government.
Organic Waste	Things that were once alive, or products of a living thing, for example, egg shells, coffee grounds, leaves, grass cuttings, or food scraps.
Packaging Materials	Any of a variety of papers, cardboard, metals, wood, paperboard and plastics used in the manufacture of containers for food, household, or industrial products.
Plastics	Man-made material that can be molded, cast, drawn, or laminated into objects.
Pollution	Anything put into the environment which could hurt people, plants, or animals.
Put out	To place in an area for pick-up and disposal purposes.
Receptacle	A container used for the disposal of litter.
Recycling	The processing and changing of waste into useful objects.

Refuse	Solid waste not carried from human habitations by sewers; consists primarily of ashes, rubbish, garbage, and trash.
Refuse-Derived Fuel (RDF)	The combustible or organic fraction of municipal solid waste which has been prepared for use as a fuel by any of several mechanical processing methods.
Residue	Something that remains after a part is separated, taken, or redesignated.
Resource	A usable supply of products or power.
Resource Recovery	A term describing the extraction and use of materials and values from the waste stream either as materials which can be used as "raw materials" in the manufacture of new products, or as values which can be converted into some form of fuel or energy source.
Rodent	Any of an order of relatively small gnawing mammals.
Rubbish	A general term for solid waste that does not contain food waste.
Salvage	The extraction of materials from the waste stream for reuse.
Sanitation	The maintenance of cleanliness and healthful living conditions.
Sanitary Landfill	A method of diposing of refuse on land without creating hazards to public health or safety.
Sewage	Liquid and solid wastes carried off with ground water in sewers and drains.
Shredder	A mechanical device used to break up waste materials into smaller pieces by tearing and impacting actions.
Sludge	Semiliquid waste that is the residue from the treatment of sewage.
Solid Waste Management	The entire process of storage, collection, transportation, processing, reclamation, and disposal of solid waste.

Technology	The means employed to provide objects necessary for human survival and comfort.
Transfer Station	A place or facility where waste materials are taken from smaller collection vehicles and placed in larger transportation trucks or barges for movement to disposal areas, usually landfills.
Trash	Waste materials which usually do not include garbage but may include other organic materials, such as plant trimmings.
Vermin	Small animals or insects that are troublesome or destructive, such as cockroaches, fleas, lice, mice, and rats.
Violation	A breaking of a law, rule, agreement, or promise.
Volume Reduction	The processing of waste materials so as to decrease the amount of space the materials occupy, usually by either 1) mechanical (crushing or shredding), 2) thermal (incineration or pyrolysis), or 3) biological (composting) processing.
Waste	Anything considered useless or worthless.
Waste Materials (solids)	A variety of substantial materials that are discarded and considered useless or worthless.
Waste Reduction	The prevention of waste at its sources, either by redesigning of products or by otherwise changing societal patterns of production and consumption.

A P P E N D I C E S

Recycling Fact Sheet

Litter Control Slogans/Bulletin Board Captions

Resource Materials

Recyclers in Louisiana

Illustrations of Activities

Incentive Awards

Skit

Song

RECYCLING FACT SHEET

- Recycling means to extract and reuse substances found in waste to produce new materials, thereby decreasing the amount of raw materials needed to manufacture new goods.

- The demand for many varied raw materials can be lessened through the use of recycled materials, for example: bauxite ore = aluminum, wood pulp = paper goods, packaging, newsprint, fiberboard; quartz sand, soda ash, limestone = glass.

- The U.S. throws away more than 135 million tons of solid waste every year; more than $5 billion worth of recyclable materials could be saved from this almost untapped source.

- Energy conservation, one of the most pressing issues of the day, is phenomenal in recycling; aluminum processed from recycled scrap instead of bauxite ore represents a 95% energy savings; paper recycling involves over 60% energy savings; producing glass from cullet (scraps of broken waste glass), gives a 35% energy savings; there is up to 75% savings in manufacturing steel from scrap rather than from virgin ore.

- Each U.S. citizen throws away about a ton of waste each year. Currently we recycle about 12 million tons yearly.

- Some 60-70% of solid wastes are combustible or could be used to produce energy in other forms (methane gas).

- Each ton of recycled newsprint saves the equivalent of up to 17 trees for other use; if everyone in the New Orleans area recycled his newspaper for just one day more than 1,000 trees could be saved.

- Newsprint makes up about 10% of urban solid waste; about 25% of the newsprint produced in the U.S. is recycled.

- Recycled newsprint can be used to produce new newsprint, insulation, fiberboard, asphalt shingles, packaging, roofing paper, construction wallboard, and other papers.

- Many experts predict that even with wood, our renewable resource, we will not be able to supply demand for paper by the year 2000.

- The U.S. Bureau of Mines estimates that over 2.6 million tons of aluminum are thrown away in the U.S. in one year.

- That flip-top can tab that we discard will take 100-500 years to disintegrate, as will the can from which it came. Can tabs are an ugly litter problem, as well as being harmful to humans and wildlife. We can put the tab back inside the can so it can be recycled, too. Better yet, we could buy cans without detachable tabs.

- Plastic loop six-pack can holders are another form of hazardous litter. These loops may take up to 450 years to decompose, and can trap, maim, and kill wildlife that get tangled in the loops. The loops should be cut before discarding the plastic holder as animals that feed in sanitary landfills are likely victims (such as raccoons and seagulls).

- In 1972, 1.2 billion aluminum cans were returned for recycling (15% of the aluminum cans produced in the U.S. that year); in 1982, 28.3 billion cans were returned (55½% of the total U.S. product).

- The U.S. spends millions each year on litter control; sanitary landfills cost taxpayers over $8 billion each year.

- The city of New Orleans spent ½ million dollars in one year on litter clean-up, and much more on regular sanitation procedures. In the same year the state of Louisiana spent a total of $3 million on litter pick-up.

- Almost all container glass is recyclable; this includes "throw-away" drink containers, and jars and bottles such as those from foods, medicines, bath items, baby foods, and alcoholic beverages. Caps and metallic and plastic parts should be removed, but labels need not be removed.

- Bauxite ore (aluminum), comprises about 8% of the earth's surface. Aluminum can be recycled indefinitely; it loses none of its qualities in the recycling process.

- It's estimated that residents of the San Francisco Bay area throw out enough aluminum annually to make 100 jumbo jets.

- Besides requiring less energy than production of virgin material, recycling results in less air and water pollution. Damage to the environment is minimized when raw materials can be more selectively gathered. There is less landfill pollution when the amounts of solid waste generated can be reduced through recycling.

- "Have not" nations abroad represent growing markets for recycled materials. Using recyclables also lessens the amount of raw materials that have to be imported into the U.S.

- The annual sales volume of the entire U.S. recycling industry is estimated at more than $15 billion. Metals account for approximately $13 billion; paper, textiles, glass, rubber, plastics and other items for about $2 billion.

- Recycling has many benefits: extra income for individuals and groups can be generated through recycling; new recycling-related businesses and job markets can develop; recycling drastically reduces the volume of wastes entering landfill sites, reducing

the expansion of these necessary, but unattractive, dump sites; recycling diverts "trash resources" into the economic cycle and reduces pollution by reducing wastes at landfills, and by encouraging the gathering of recyclable resources, thereby reducing litter; recycling saves taxpayers money by reducing funds necessary to handle sanitation and litter control; recycling saves valuable raw resources; promotes better use of our environment by causing us to rethink the ways in which resources are gathered, manufactured, and discarded; recycling promotes energy conservation, and promotes wastes as a possible energy source;...the list goes on. Recycling is a necessity now!

- "Throwing away an aluminum beverage container wastes as much energy as pouring out a can ½-filled with gasoline," William Chandler, researcher at World Watch Institute.

- Some hard facts on decomposition; rates of disintegration vary according to the amounts of sunlight, moisture, temperature, and other variables: Common Littered or Discarded Items:

paper drink container = 5 years;
foam container = 10--20 years;
banana peel = 1 week--6 months;
cotton rag = 1--5 months;
bimetal can = 100 years;
aluminum can or tab = 100--500 years;
plastic container = 50--80 years
plastic loop 6 pack holder = 450 years;
painted wooden board = 13 years;
glass bottle = if unbroken, practically indestructible.

Recycle
New Orleans
(504) 241-9606
The Louisiana Nature Center
11000 Lake Forest Blvd.
New Orleans, LA 70127

Litter Control Slogans/Bulletin Board Captions

Don't Be a Litterbug

Stack the Trash

Don't Litter

Smash Trash!

Fight Litter!

Keep Louisiana Beautiful

Clean Is King

Don't Toss It Out - Toss It In!

Litter and Dirt - Hurts

You Are the Solution to Pollution

Only You Can Stop Pollution

Don't Be a Litter Critter

Right in

Use Good Taste - Don't Waste

I'll Wear a Frown If You Throw Litter Down

Choke, Choke, Litter's No Joke

Give a Hoot - Don't Pollute

People Start Pollution. People Can Stop It.

You Can Put a Lid on Litter

Hold Fast to Your Trash

Don't Cast Your Trash to the Wind

Pitch in!

Take Pride in Louisiana

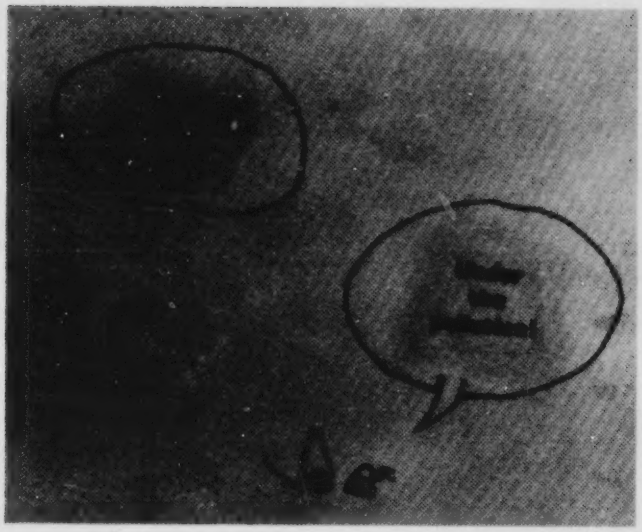
Help Keep Louisiana Clean

I'm the Clean Machine

Let Your Feet do the Walking to the Trash Can and Pitch in!

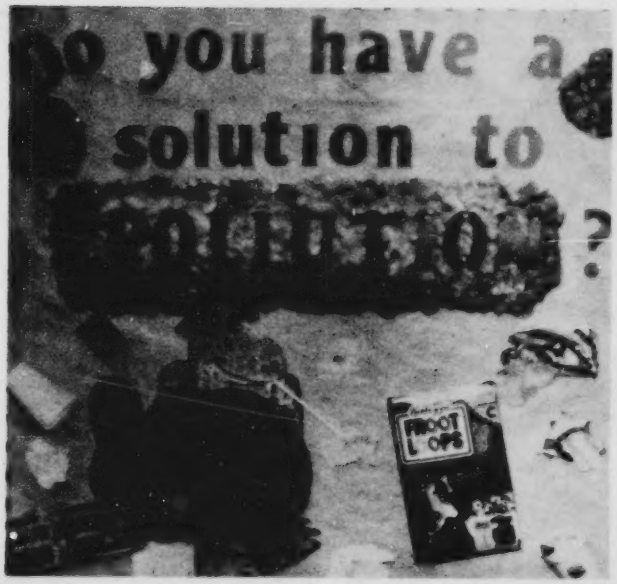
Suggested Bulletin Boards

1. Where's the beef?



2. Clean is King

3. Do you have a solution to POLLUTION?



4. He Spoils the Green

BEST COPY AVAILABLE

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B. Films

1. Help Yourself. Bloomington, Indiana: Indiana University Audiovisual Center, 29 min. Requires 8 days notice. Call 812-335-2103
2. Money to Burn. Austin, Texas: Travel and Information Division, Texas Highway Department Film Library, 20 min.
3. Resources Recovery Is. New York: Modern Talking Picture Service, 20 min.
4. Sanitary Landfill. Washington, D.C.: NACD, Distribution Branch, National Audiovisual Center, 15 min. Requires 30 days notice. Rental fee.
5. The House That Recycling Built. Richmond, Virginia: Reynolds Metal Company, 9½ min.
6. The Trouble with Trash. New York: Modern Talking Picture Service, 28 min.
7. To Four Parts Refuse. Washington, D.C.: NACD, Distribution Branch, National Audiovisual Center, 15 min.
8. Forest Murmurs. Northfield, Illinois: Perennial Education, 8½ min.
9. Help Workers Spread the Word. Los Angeles, California: Animation Production Inc., 18 min.
10. In the Bag. Burbank, California 91521: 500 South Buena Vista Street, Walt Disney Production, 8 min. Grade K-8. Arrange for rental by calling 800-631-7345.
11. Meeculogy. Lake Forest, Illinois: Peshak Films, 26 min. Available free of charge by writing Creative Services, 2715 Jorie Blvd., Oak Brook, Illnois 60521, ATTN: J. Baker.
12. The Litterbug. Burbank, California 91521: 500 South Buena Vista Street, Walt Disney Production, 10 min. grades K-8. Arrange for rental by calling 800-631-7345.
13. The Litter Munster. New York, New York 10016: 97 Park Avenue, Keep America Beautiful Inc., 15 min.
14. A Community Park. New York: Youth Film Distribution Center, 8 min.
15. A Decent Burial. New York: Modern Talking Picture Service, 12 min.
16. Bulldozed America, New York, N.Y. 10036: 1501 Broadway, Suite 1503, CNS, Carousel Films, 25 min., (TV programs) 1965.
17. Garbage, New York, N.Y. 10017: 383 Madison Ave., Holt, Rhinehart and Winston, Inc., Media Dept., 10½ min., Color, 1970.
18. How Trees Help Us, Chicago, Illinois 60601: 65 E. South Water St., Cornet Building, #1025, Cornet Films.
19. Litterbug, Glendale, California 91201: 800 Summa Ave., Walt Disney Educational Materials Co., 8 min., Color.
20. Recycling Waste, Chicago, Illnois 60614: 909 Dinersey Parkway, Journal Films, Inc., 12 min., Color.
21. Saving Our Environment: The Garbage Explosion, Chicago, Illinois 60611: 425 N. Michigan Ave., Encyclopedia Britannica Educational Corp., 15 min., 1970, Color, B/W.
22. The Third Pollution, Falls Church, Va. 22041: 3428 Mansfield Rd., Stuart Finley, Inc., 23 min., Color.

23. A Place to Begin. New York, New York 10016: 97 Park Avenue, Keep America Beautiful, 13½ min.
24. Ecology Lady. Falls Church, Virginia: Stuart Finley, Inc, 15 min.
25. Wealth Out of Waste. Washington, D.C.: Bureau of Mines, U.S. Department of the Interior, 20 min.

C. Booklets, Pamphlets, and Catalogues
(These materials are available upon request.)

1. You may write for an Environmental Education Pack and Nature Center Planning information to:

The Sierra Club
530 Bush St.
San Francisco, CA 94108

Nat. Audubon Society
950 Third Ave.
New York, NY 10022

2. The Forest Service offers free materials about Forest Conservation. Write to request catalog FS-28 and Suggestions for Incorporating Forestry into the School Curriculum FS-62

U. S. Department of Agriculture
Washington, DC 20250

3. A catalog, A Selection of Water Conservation Program Aids is free from:

The Department of Water Resources
P. O. Box 388
Sacramento, CA 95802

4. Ecology for City Kids, costs $2.50 a copy and may be ordered from:

Ecology for City Kids
13 Columbus Ave.
San Francisco, CA 94111

5. A bulletin board for a school hallway can be achieved by using "The Changing Countryside," a mural of seven very large fold-out pictures in color, showing what can happen to a countryside in a few years' time. Also available is Vol. II, "The Changing City," which is equally impressive. Both can be ordered from:

Atheneum Publishers
122 E. 42nd St.
New York, NY 10017

$40.00 a piece

6. The Green Box offers humanistic environmental teaching materials. The Green Box Kit includes 96 Do cards, 250 Activity Cards, 5 Think Cards, 40 School Projects, and 7 Activity Booklets for $40.00. You can write to request a three-dollar sampler, The Seed Book, which includes 2 Do Cards, 1 Think Card, and 2 Activity Cards from:

   Humanistic Environmental Education
   Humboldt Country Supt. of Schools
   555 H Street
   P. O. Box 11408
   Eureka, CA 95501

7. Write for information on the Student Booklet "The Trash Monster," an Environmental Education Program developed by SWRL Educational Research & Development.

   Louisiana Litter Control & Recycling Commission
   P. O. Box 44245, Capitol Station
   Baton Rouge, LA 70804

8. Available in limited quantities without charge Mickey Mouse and Goofy Explore Energy Conservation comic book. Write to:

   Exxon U.S.A., Public Affairs Dept.
   P. O. Box 2180
   Houston, TX 77001

9. Write for a copy of the booklet: "Your Community and the Clean Community Systems," 15¢ single copy.

   Keep America Beautiful
   97 Park Avenue
   New York, NY 10016

10. Write the following organizations for available publications:

   National Solid Waste Management Association
   Publication Department
   1730 Rhode Island Ave., N.W.
   Suite 512
   Washington, D.C. 20036

   Institute of Scrap Iron and Steel, Inc.
   1627 K Street, N.W.
   Washington, D.C. 20006

   National Wildlife Federation
   Educational Servicing Section
   1412 Sixteenth Street, N.W.
   Washington, D.C. 20036

Recyclers in Louisiana

A. Newsprint-Paper

1. Bird and Son (Mixed paper)
   P. O. Box 72 (mailing)
   620 Aero Drive (location)
   Shreveport, La. (318) 221-0581
   Open Mon.-Fri: 8-5

2. Consolidated Fibers
   P. O. Box 614 (mailing)
   1046 Pittsburgh Avenue (location)
   Baton Rouge, La. 70821 (504) 343-2010
   Open Mon. - Fri: 7:30-3:30

3. Consolidated Fibers
   P. O. Box 53205 (mailing)
   3035 Earhart Drive (location)
   New Orleans, La. 70126 (504) 522-7652
   Ed Gray, Representative (collection pickup available)

4. New Orleans Recycled Fiber (cardboard no magazine or phone books)
   P. O. Box 10557 (mailing)
   4906-A Jefferson Hwy.
   Jefferson, La. 70181 (504) 733-1954
   Open Mon. - Fri: 8-4:30, Sat. 8-12:00-will pick up

5. Recycling Services Inc.
   P. O. Box 1386 (mailing)
   410 Landa Street
   Alexandria, La. 71309 (318) 443-8974

6. Southeast Recycling Corporation
   6400 Powers Ferry Landing, Suite 102
   Atlanta, Georgia (404) 955-8775
   George Elder, Representative (collection pick up available)

7. Tulane University Cactus
   McAllister Dr. and Freret (behind Playhouse)
   New Orleans, La.
   Collection Only, No payment
   Open 7 days/week; 24 hrs./day

B. Aluminum

1. Airline Auto Salvage (cans, siding)
   23¢/lb. for 100 lbs.
   24¢/lb. for 100-200 lbs.
   25¢/lb. for 200 lbs.
   6900 Airline Hwy.
   Metairie, La. (504) 737-1100
   Open M-F 8:30-12, 1-5 and Sat. 8:30-12

2. Alexandria Iron & Supply
   P. O. Box 2026 (mailing)
   711 Ariail St. (location)
   Alexandria, La. 71309 (318) 445-2441
   Open M-F, 8-4:30 - Sat. 8-12

3. Aluminum Recycling Center of Lafayette (all metals, but iron)
   2205 Cameron St.
   Lafayette, La. 70506 (318) 233-0112
   Open M-F, 8-4:30, Sat. 8-12

4. Cash for Cans (multi-recycling center)
   5603 Work Avenue
   Shreveport, La. (318) 635-6290
   Open M-F, 8-4:30, Sat. 8-12

5. Crescent Distributing
   5733 Citrus
   Harahan, La. 70123 (504) 733-8705
   Open M,W,F, 9-12, 1-2:30

6. G & G Distributing Corp.
   410 Hamilton Rd.
   Bossier, La. 71111 (318) 747-2337
   Open M-W-F, 3-5, Sat. 9-12

7. Kaiser Aluminum
   Suite 2430, One American Place
   Baton Rouge, La. (504) 344-8100
   (Do not recycle--information only)

8. Louisiana Coca Cola (alum. 28¢/lb.)
   1050 Jefferson Davis Parkway
   New Orleans, La. 70125 (504) 822-2400
   Open M-F, 9-3

9. Dixie Brewing
   2401 Tulane Avenue
   New Orleans, La. 70119 (504) 822-8711
   Open M-F, 8-12

10. Reynold's Aluminum Recycling
    310 Powell Avenue
    Monroe, La. (318) 325-4292
    Open Tues.-Sat, 9:30-4

11. Reynold's Aluminum Recycling Center
    2312 Scenic Hwy.
    Baton Rouge, La. 70802 (504) 357-2001

12. Streva Distributing Co.
    West Admiral Doyle Drive
    New Iberia, Louisiana 70560
    (318) 369-3838

13. Tulane University Cactus
    6319 Willow
    New Orleans, La. (504) 865-5344
    Collection only, no payment
    Open only during school year
    7 days/week; 24 hrs./day

14. YMCA (alum. only 23¢/lb.)
    2220 Dryades
    New Orleans, La. (504) 522-8811
    Open Wednesday 1-5

C. Glass

1. Container General
   400 W. 45th Street
   Chattanooga, Tennessee 37410
   (615) 821-6551
   Bobby Wood

2. Laurens Pierce Glass (clear, light green; $2 per. 100 lbs.)
   P. O. Box 789 (mailing)
   Ruston, La. (318) 255-6217
   Hwy 563, Simsboro, La. (location)
   Open M-F, 8-5

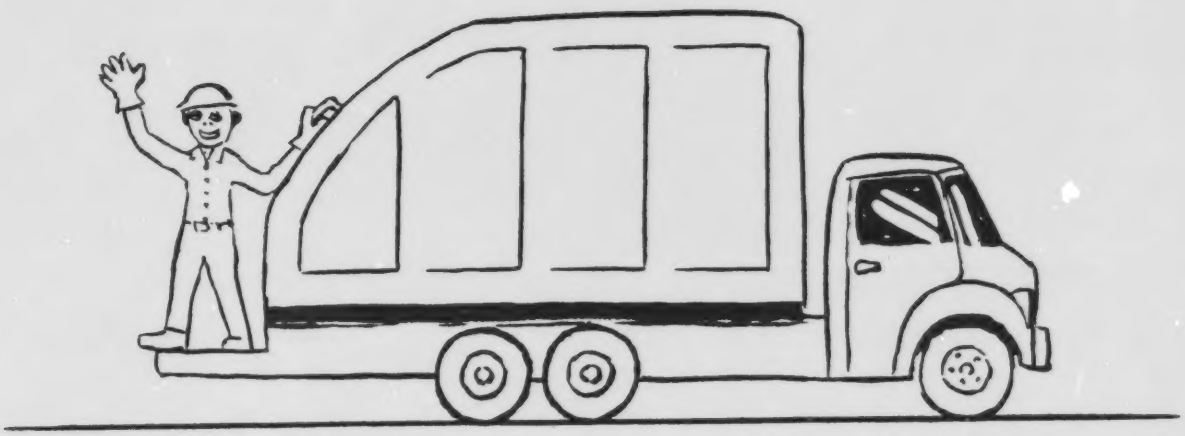
3. Owens Illinois (glass bottles & jars) will pick up
   4300 Jourdan Rd. (off Chef Menteur)
   New Orleans, La. (504) 245-2255
   Prices: 1¢ lb. less than 2000 lbs.
   (separate by color; no metal)
   2¢/lb. greater than 2000 lbs.
   Open: Thurs. Only 8-11:30, 12:30-2

D. Oil

1. National Oil Service of Louisiana
   14890 Intracoastal Drive
   New Orleans, La.
   Richard Lane, Representative

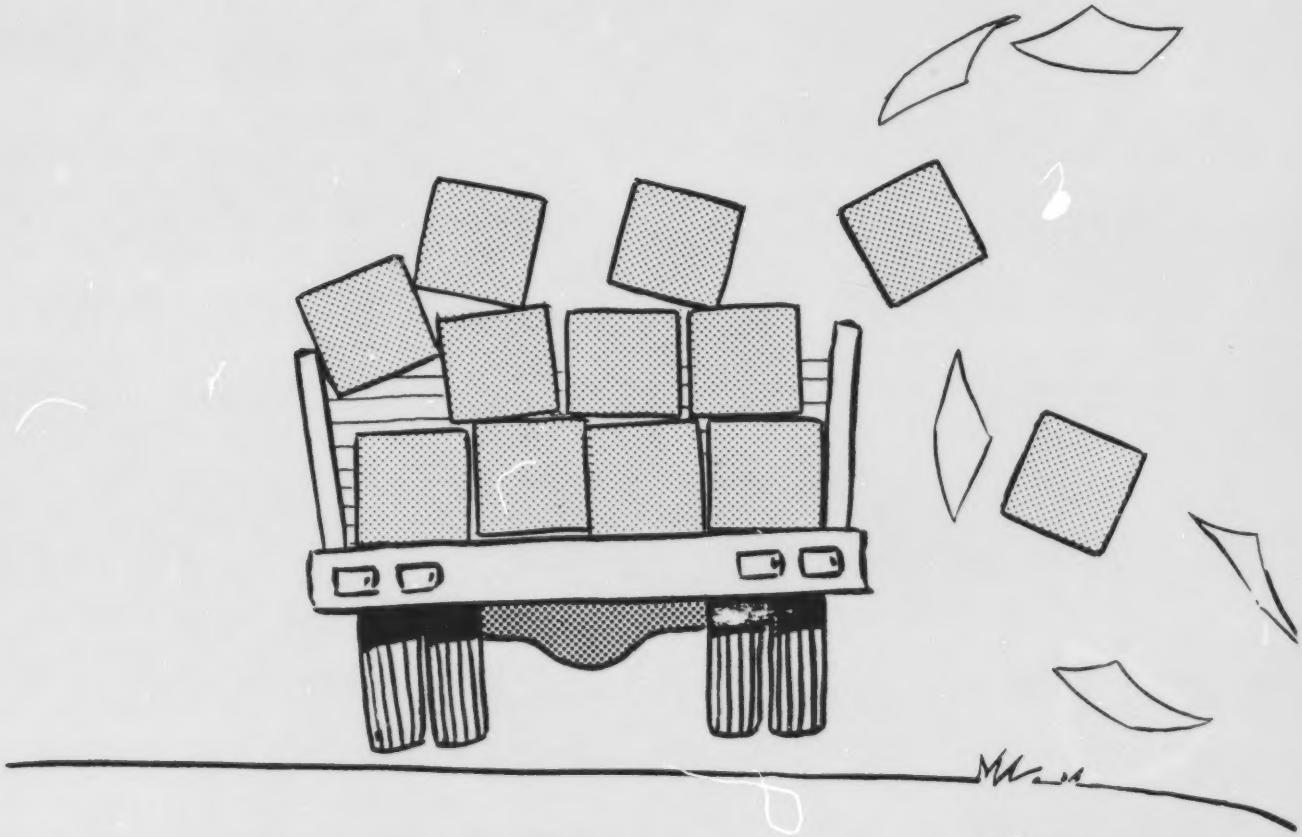
ILLUSTRATIONS

SANITATION WORKERS ARE OUR FRIENDS



START THINKING...
STOP LITTERING!

START THINKING...
STOP LITTERING!

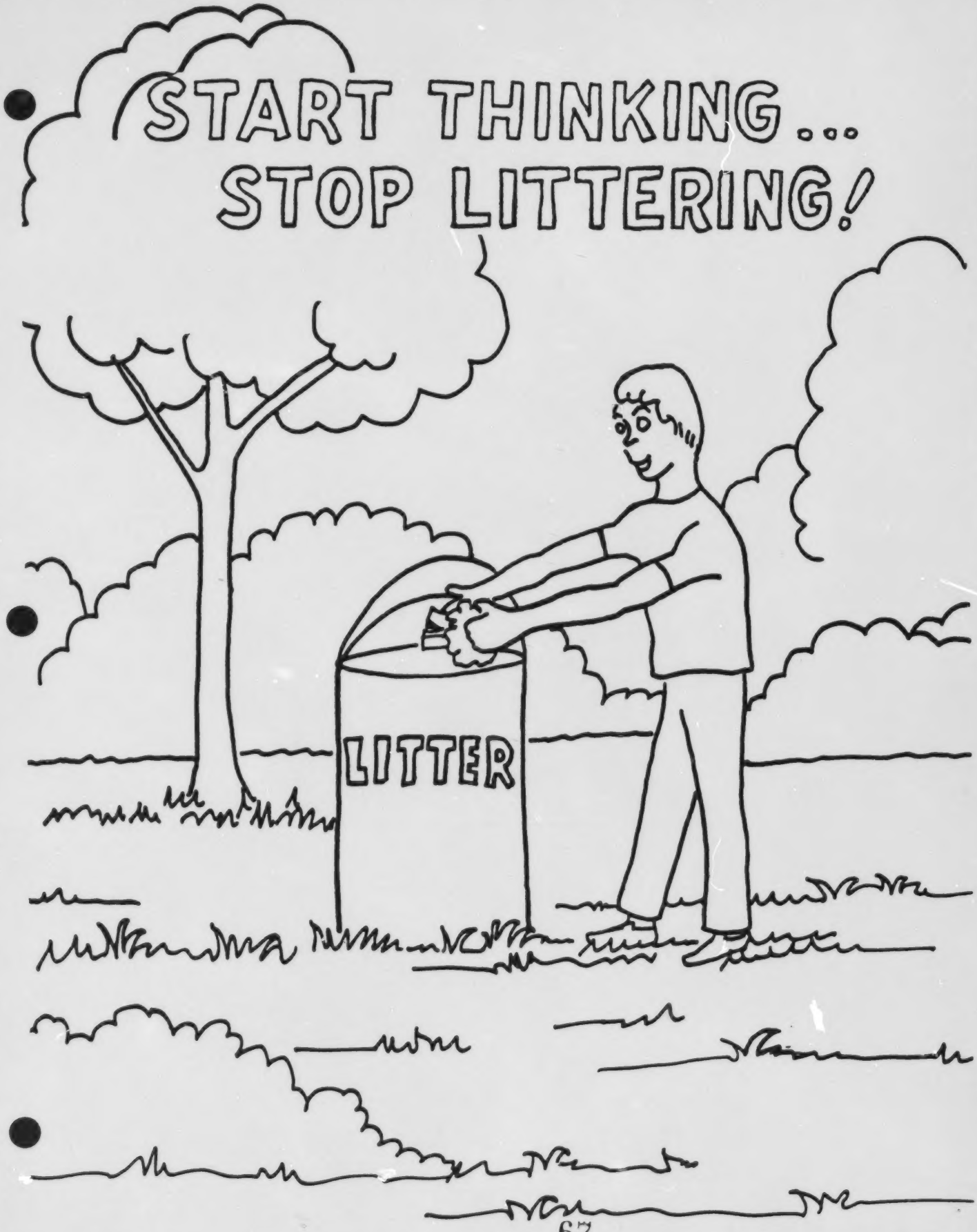


COMPOSTING IS FUN

START THINKING...
STOP LITTERING!

LITTER IS DANGEROUS

A6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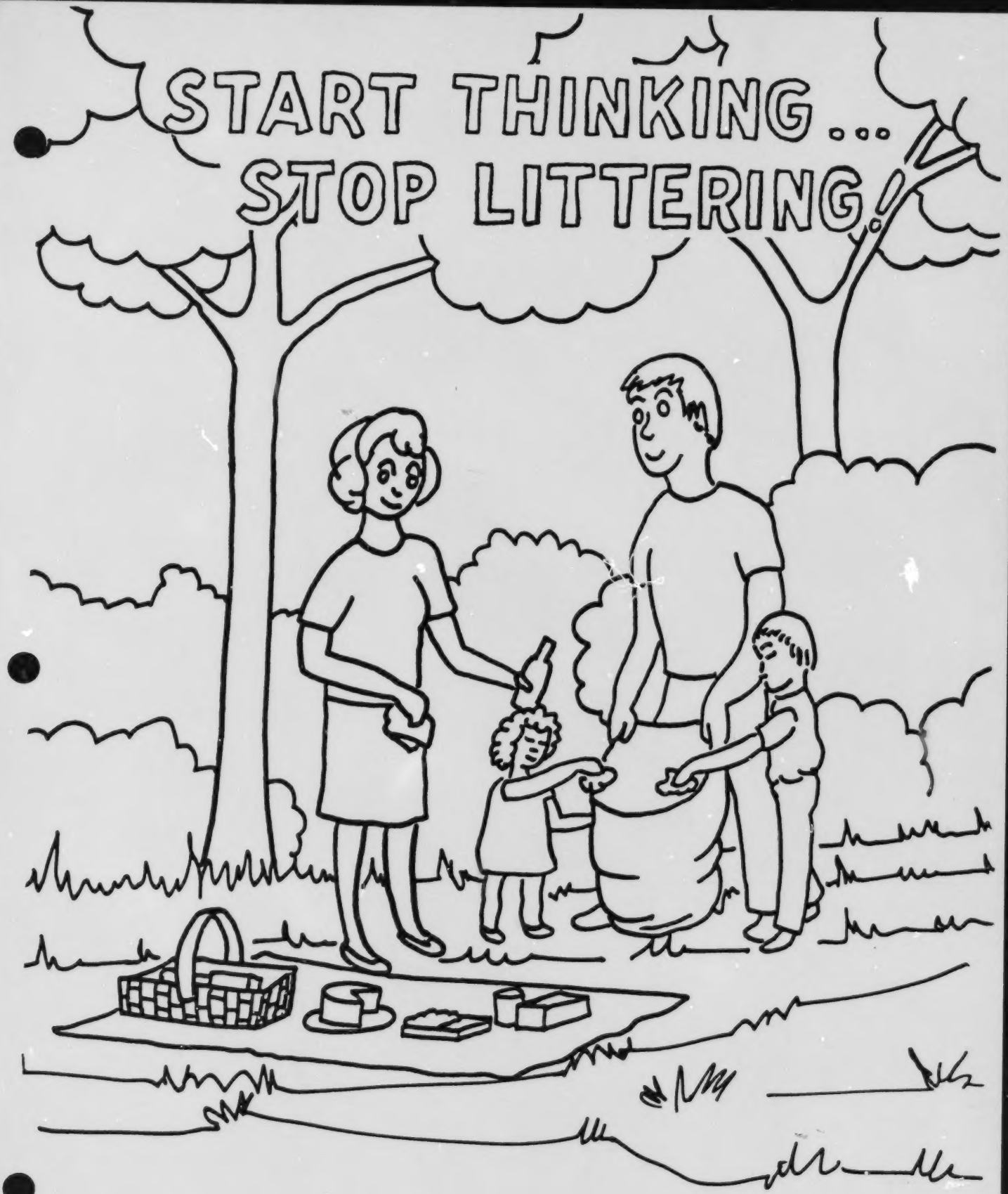
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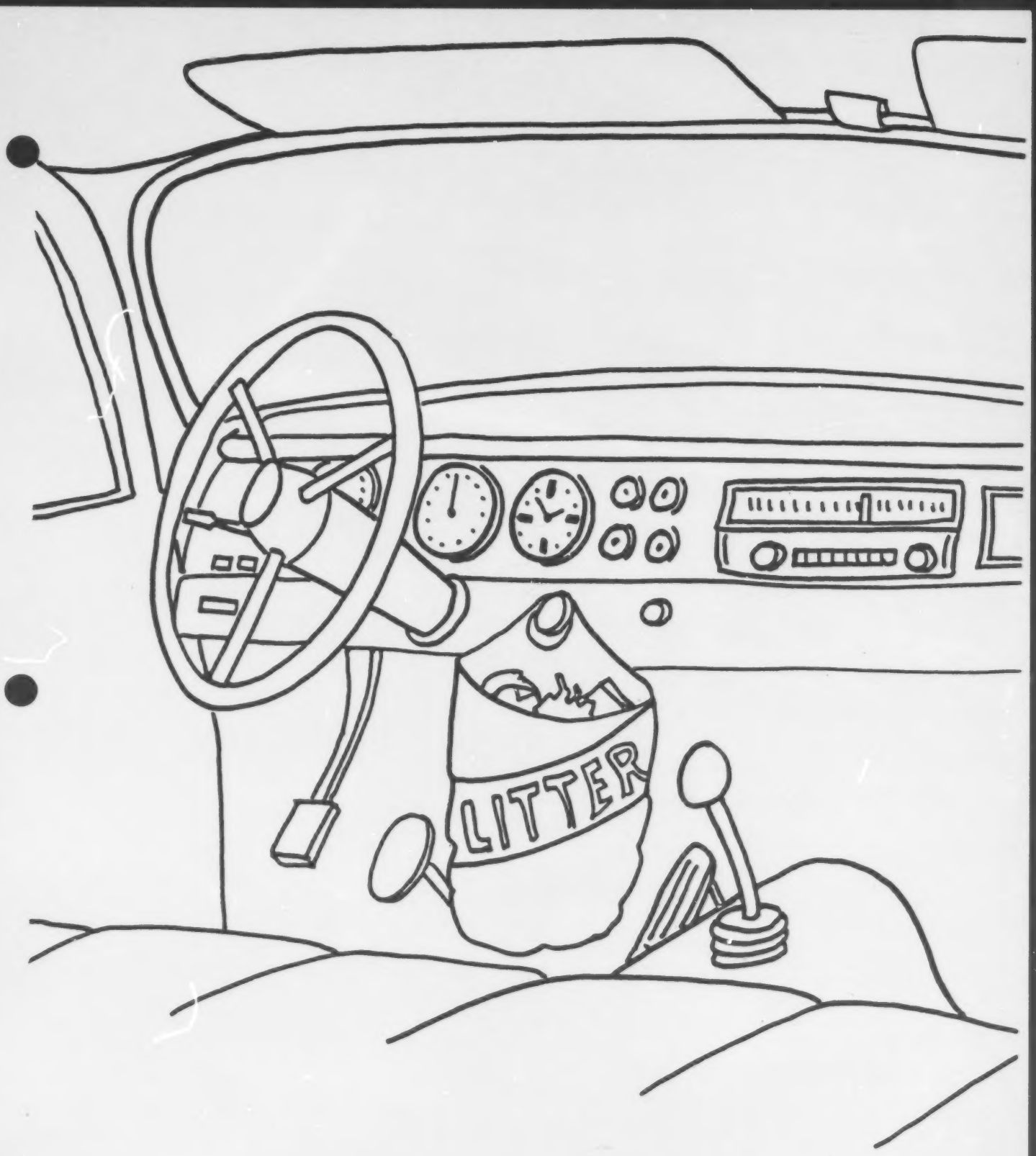
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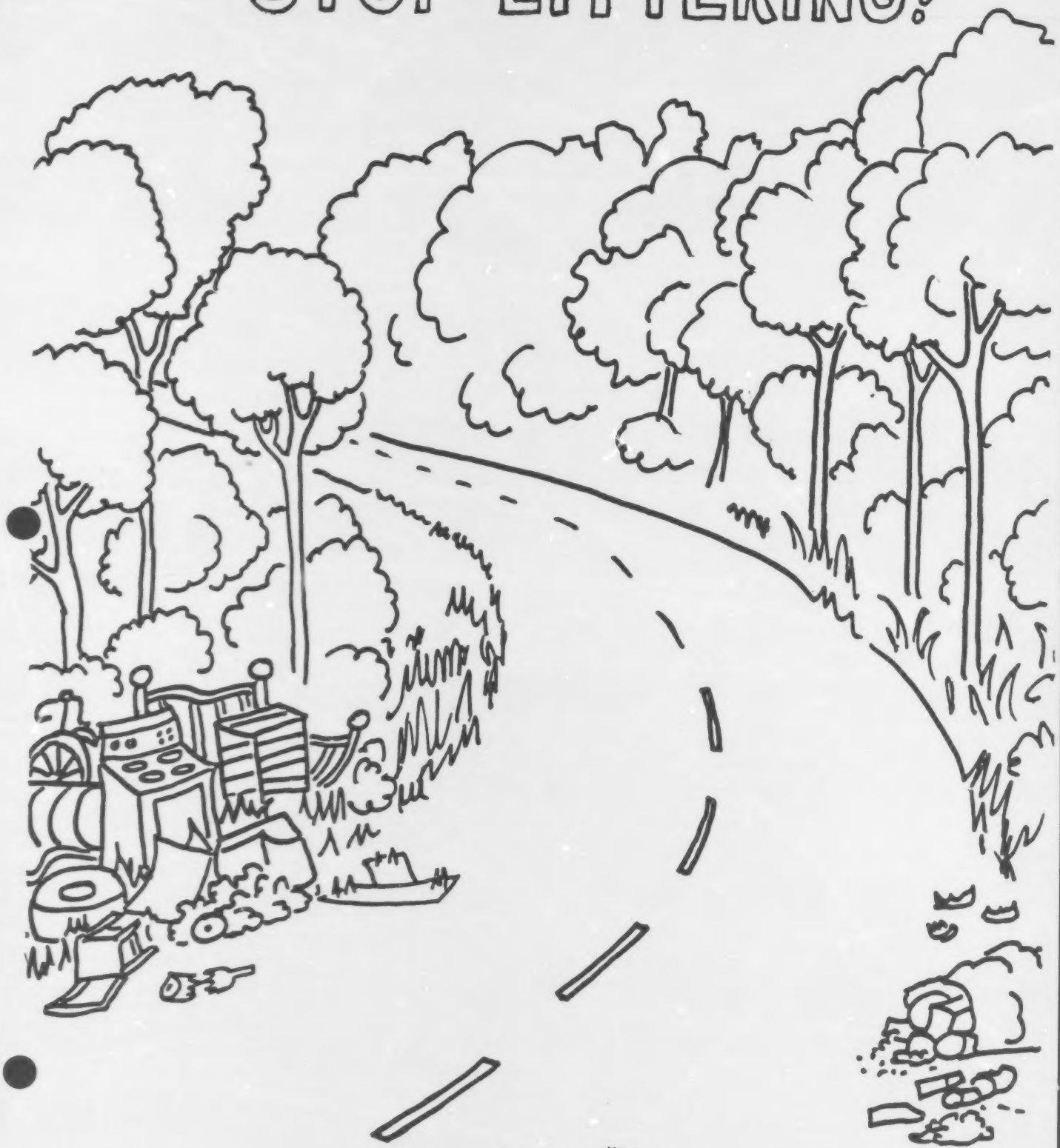


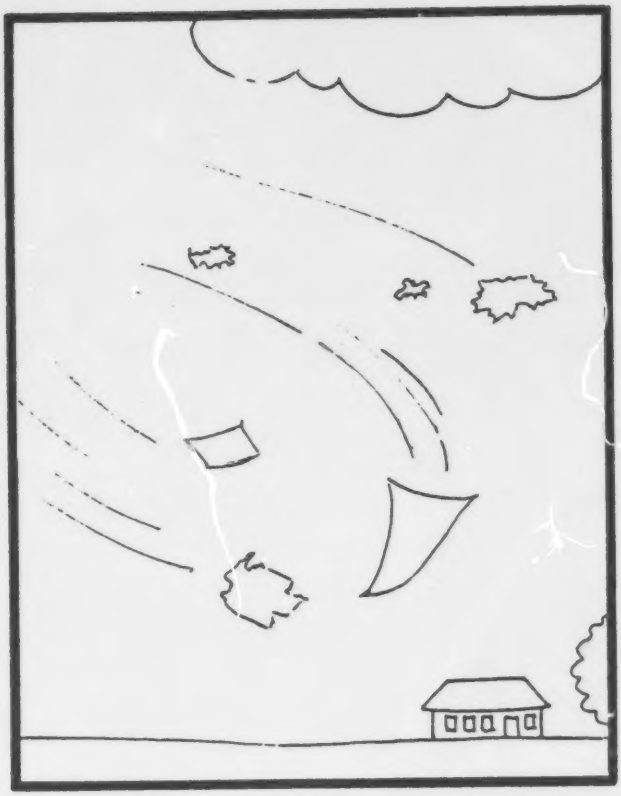
START THINKING...
STOP LITTERING!

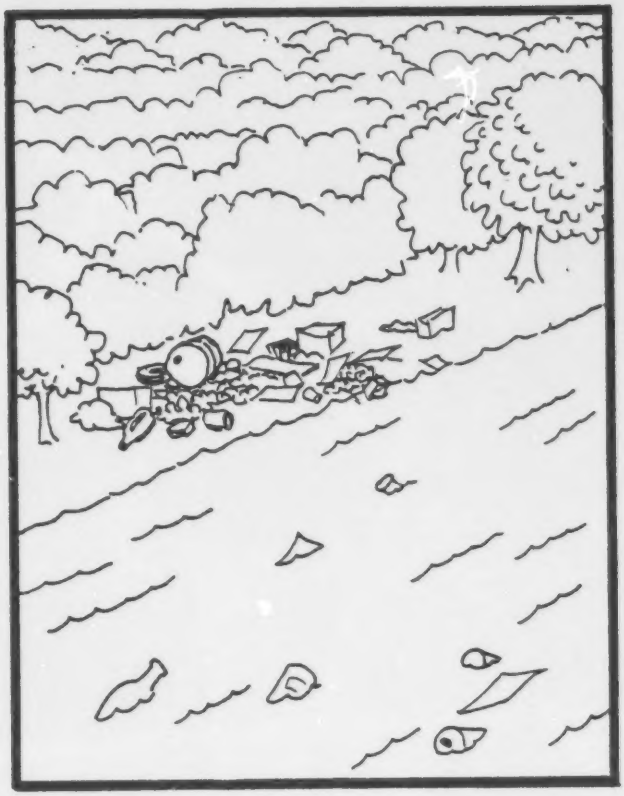
RECYCLE

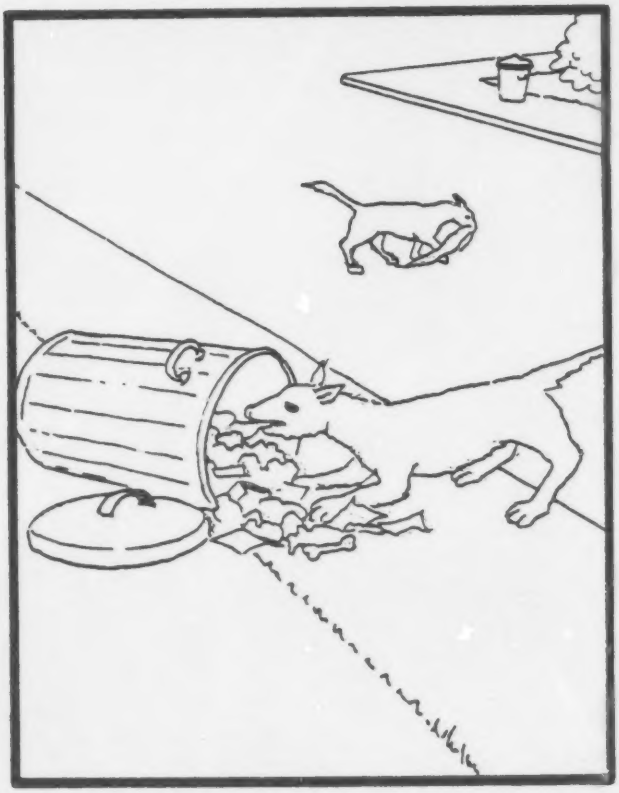
START THINKING...
STOP LITTERING!

A15

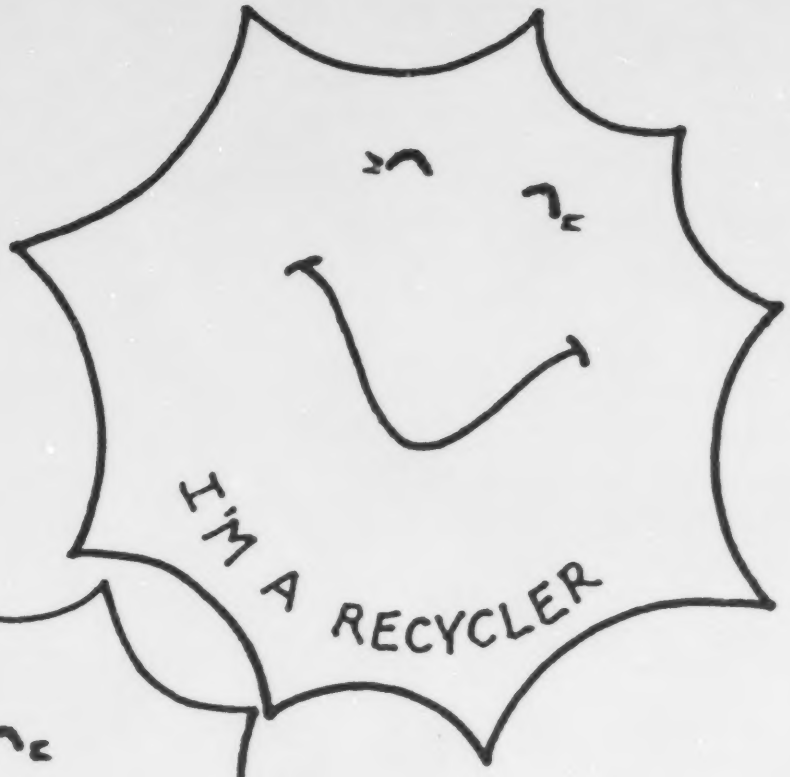
LITTER TRAVELS

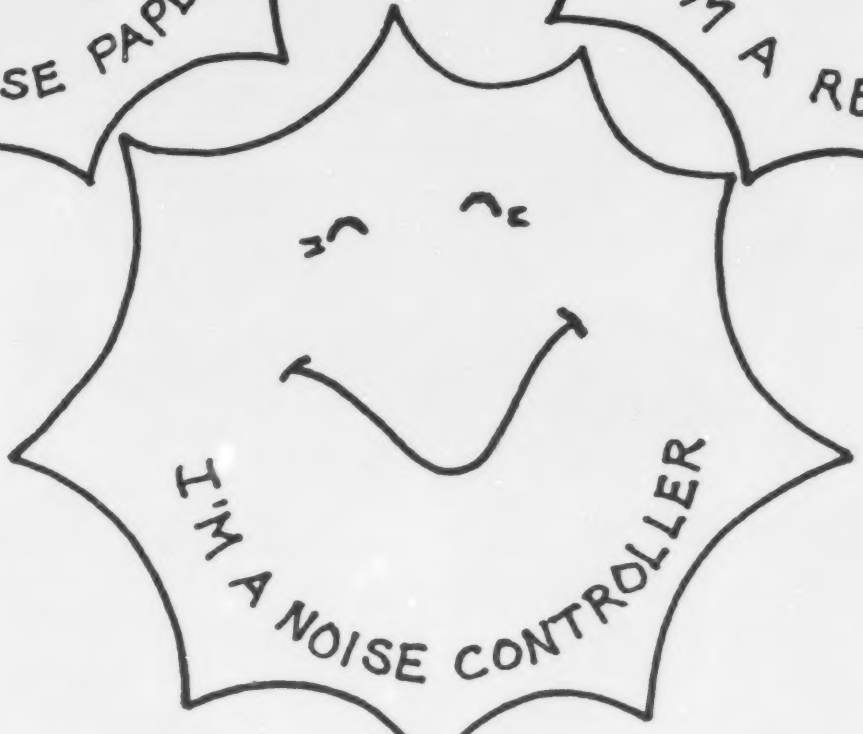






INCENTIVE AWARDS





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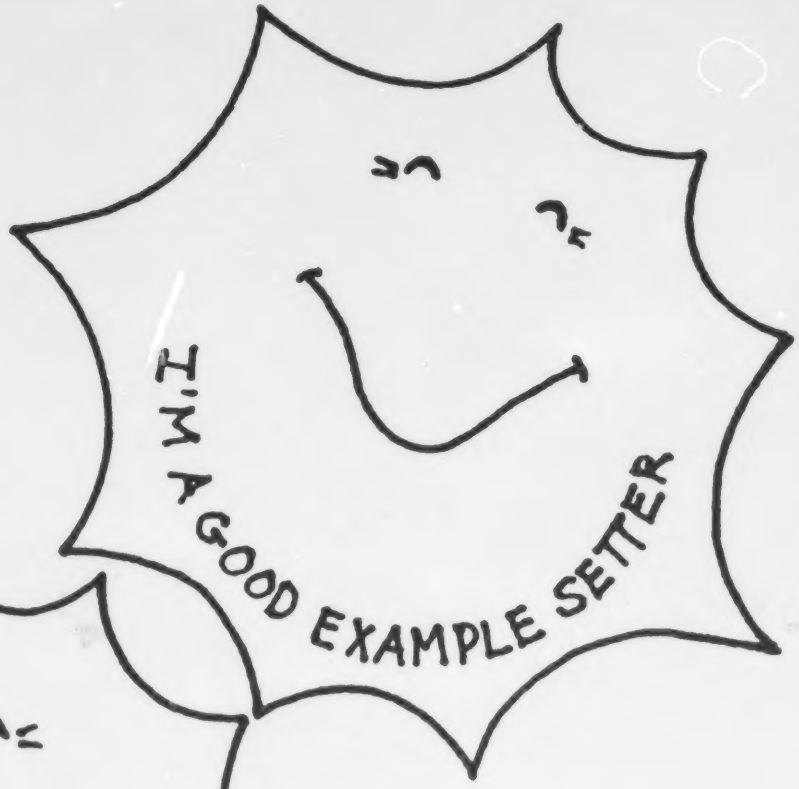

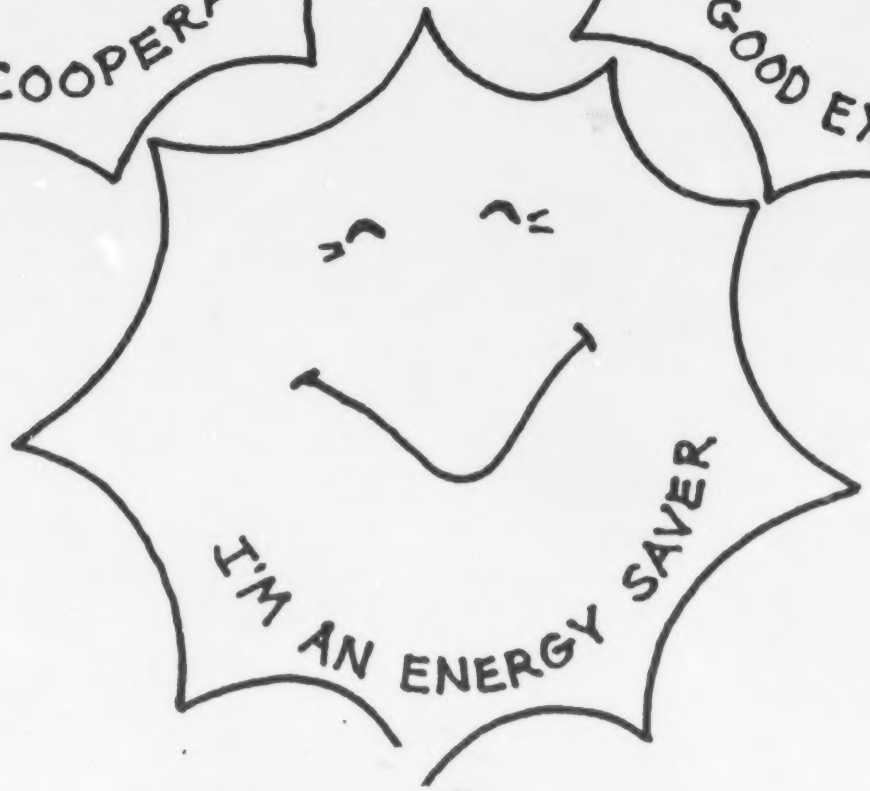

B2

80

81

I COOPERATE.

I COOPERATE.

I COOPERATE.

I COOPERATE.

I USE PAPER WISELY.

I USE PAPER WISELY.

I USE PAPER WISELY.

I USE PAPER WISELY.

I RECYCLE.

I RECYCLE.

I RECYCLE.

I RECYCLE.

I SET A GOOD EXAMPLE.

I SET A GOOD EXAMPLE.

I SET A GOOD EXAMPLE.

I SET A GOOD EXAMPLE.

SKIT

Gray-Jones Company

This is the
Gray-Jones Co.
CCC
Hello,
Boys & Girls
LM HAMRICK

(SKIT FOR CLOWN, ONE OTHER PERSON, AND HAND PUPPETS)

Copyright Applied for

Script Written by:

Mrs. Coxie Davis

Gray, Georgia 31032

May Be Duplicated for School Use, But Not to Be Sold

(Clown and C.C. approach each other; clown's head is down and he bumps into C.C. Clown has a bag on his back. In it he has the puppets, dog, rooster, spider, monkey, and raccoon.)

C.C.: Hey, why don't you look where you are going? And why are you walking down the street, anyway? I never saw a clown except in the circus or in a parade.

Clown: I'm very sorry I bumped into you; I just wasn't looking where I was going. You see, I am not a circus clown anymore. I decided to leave the circus.

C.C.: Why on earth would you do that?

Clown: Because I am so unhappy and depressed, I can't make people laugh anymore.

C.C.: Goodness, I don't know why you'd be depressed. I'd love to be in a circus and go to all of those different towns and ride along the highways looking at all the beautiful sights.

Clown: Beautiful sights! I can tell you haven't been anywhere in a long time. The sights you see now are not beautiful. They are ugly. The streets and highways have bottles and cans and paper and garbage all over them. We sure can't sing "America the Beautiful" anymore. It would be more like it to sing, "My country tis of thee, You are so littery." And what is so bad--Nobody cares.

C.C.: Hey, now wait a minute. You may be right about the litter and the trash but you aren't right about nobody caring. Somebody does care. Haven't you ever heard about the people who are working to Keep America Beautiful? They are organized into a group called the Clean Community Commission. Believe me--they care and they are working very hard.

Clown: No, I never heard of them. Do you have one in this county.

C.C.: Sure we do. In fact, that's where I got my nickname--C.C. It stands for Clean Communities. Would you like to know some of the things we are doing?

Clown: I sure would.

C.C.: Well, for one thing we've been going in all of the schools trying to tell the boys and girls how important it is to work with us on this project. We had a puppet show last year and we tried to show it in all of the schools. Here, we are in front of _____ _____ School right now. Let's go in and see if these boys and girls can tell us anything about how we are trying to keep our county clean and beautiful.

(Walk toward front of stage or go down on the floor level.)

C.C.: Hello, boys and girls. Can you tell this sad clown anything we are doing in Gray and Jones County to clean it up?
(Call up a few that the teachers have selected that would have some good ideas or just call on anyone and have it ad libbed.)

C.C.: O.K., that's great and I wonder if you remember the song the puppets taught us last year about Keeping America Beautiful. Let's sing it for the clown. (Sing KAB Song.)

Clown: Goodness! that sounds great. It really sounds like somebody does care. (Turns around and talks to sack on back; or, if he has sat it down opens the top and speaks into it.) Hey, did you hear that, fellows? Maybe we have come to the right place and maybe we can help.

C.C.: Great, we'd love to have you.

Clown: (Taking out Benjy) Hey, Benjy, what would you say to the boys and girls?

Benjy: Well, I would make out some rules like--Never throw garbage on a dumpster when it's already full, or always pick up trash and put it in a trash can, even if you didn't drop it. Never throw litter out of a car. Lots of rules like that and then when they had done all this, I would give them a bone for a reward and I'd sing: (May be sung to tune "Oh Where, O Where Has My Little Dog Gone?)

"Oh where, oh where has the litter all gone?
Oh, where, oh where can it be?
This place really looks neat.
There's no trash on the street
And that makes me happy, you see! Arf, Arf."

C.C.: Say, that's a great idea, Benjy, except I'm not sure the boys and girls would want a bone for a reward.

Meano, the monkey: Hey, that's not the way to make people be neat--givin'em rules and singing sweet songs. People hate rules. You have to get tough!

Spider: Oh, Meano, you are so violent! You just have to remind people to put trash in the trash cans. That's what I'd do.

"Little Miss Muffet, sat on a tuffet
Eating a candy bar.
Along came a spider (that's me)
Sat a trash can beside 'er

And said, "Hope you know what it's for."

(Monkey joins in.)

"Huh, if she threw down that wrapper
I'd go up and slap 'er
Right up side of her face;
I guess I am mean
But I like things clean.
She'd just better put trash in its place."

Raccoon: Oh, I don't think you ought to slap people like that, Meano. I think that is as bad as throwing trash. There must be a better way to help them remember. For instance, how about teaching them this song and if they sing it over and over, that would help them remember. (May be sung to tune "If You're Happy And You Know It, Clap Your Hands.")

"If you see a piece of trash, pick it up--pick it up.
If you see a piece of trash, pick it up--pick it up.
Pick it up in your hand,
Throw it in a garbage can.
If you see a piece of trash, pick it up.

If there's litter in your car, don't throw it out--
don't throw it out.
If there's litter in your car, don't throw it out--
don't throw it out.

Always keep a litter sack

In the front seat or the back

If there's litter in your car, don't throw it out."

Clown: That's a great song, Randy Raccoon, let's see if the boys and girls will sing it with us.

(All sing--This can be omitted, if you like.)

Clown: (Reaching down in sack to get the rooster.) Who ruffled your feathers, Foghorn, why are you so quiet? You are usually crowing so loud, we can't hear ourselves think.

Rooster: Well, I can't crow if I have nothing to crow about, can I? I was just being quiet and thinking up a poem to say to the children and then I'd have something to crow about.

Clown: O.K., let's hear it.

"I'm Foghorn, the rooster,

A strange looking critter

And I'm here to tell you

'Bout trash and litter.

If we keep scattering litter

Far and Wide

And don't care about America

And don't have any pride

Pretty soon we'll have garbage

All over the land;

We'll be up to our necks

In bottles and cans.

So let's hear it loud and clear.

Let's stand up and shout,

Keep America Beautiful

So we'll have something to crow about."

(Rooster crows -- Cock-a-doodle-doo)

C.C.: Hey, that's great Foghorn. Now, Mr. Clown, do you feel better?

Clown: Do I? I really feel great and I'm going to go all around the county reminding people to keep Jones County and America beautiful--- KAB. Say, I believe I'll change my name to Kab the Clown. How does that sound?

C.C.: Sounds great to me and we could really use your help.

(Clown puts puppets back in sack as they both tell the boys and girls good-bye and tell them to remember all they've heard.)

(For instance -- Well, I guess we'd better leave now -- Bye boys and girls -- Remember -- Don't be litter bugs! Bye.)

SONG

Clean is King

CLEAN IS KING

SET TO THE MUSIC OF

"EVERY MAN A KING"

WORDS & MUSIC

BY

HUEY P. LONG AND CASTRO CARAZO

Voice
Why should we lit-ter A - mer - i - ca
mf
Land of brave and true
Lou - i - si - an - a can lead the way
Mak - ing all things new
Ev - 'ry
mf

Chorus
town so clean_____ Ev - 'ry town so clean__
(mf)
Feel-in' like a mil - lion - aire_____ When you learn not to lit -
___ ter You'll start to feel bet_____ - ter Fresh and clean is a feel___
___ - ing to share._____ Ev - 'ry town so clean___

4.

Ev - 'ry town so clean In the Win - ter
Fall or Spring Be - ing clean is just great in the
Pel - i - can State Lou - i - si - an - a, Clean is
1
King.
2
King.

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